Tod Moody, President
Omar Arias-Montez, Vice President
John Carapiet, Secretary
Catharine Benediktsson, Director
Richard Snyder, Director

NOTICE AND AGENDA
Regular Board Meeting
at Sanitary District No. 5 of Marin County
Thursday, September 21st, 2023

5:00 P.M. REGULAR BOARD MEETING

Teleconference Location:
Director Richard Snyder
10 Pomander Walk
Belvedere CA 94920

PURSUANT TO THE RALPH M. BROWN ACT, ALL VOTES SHALL BE BY ROLL CALL DUE TO DIRECTOR SNYDER TELECONFERENCE FROM 10 Pomander Walk Belvedere CA 94920

ROLL CALL:

PUBLIC COMMENTS: The public is invited to address the Board on items that do not appear on the agenda and are within the subject matter jurisdiction of the Board. The Brown Act does not allow the Board to take action on any public comment. Please limit public comments to no more than three minutes.

DIRECTORS' COMMENTS AND/OR AGENDA REQUESTS:

CONSENT CALENDAR:

1. Approval of August 19th, 2023 Regular Board Meeting Minutes
2. Review and receive all electronic fund transfers (EFTs) and approve warrants from September 14th, 2023, through October 15th, 2023, (JP Morgan Chase Bank, check no. 9965 through check no. 10036, all transactions totaling $1,295,106.23) and receive July 2023 payroll, in the sum of $158,735.28 (Dohrmann)
3. Receipt of Financial Reports for August 2023 (Dohrmann)

MANAGEMENT REPORTS:

4. District Manager Summary Report (Rubio)

NEW BUSINESS:

5. Review and discuss letter from Wulff, Hansen & Co. regarding possibility of investing in short term U.S. Treasury Securities. (Rubio) - Discussion only

6. Discussion regarding Office reception area and possible expenditure of funds to install wall partitions to provide privacy/efficiencies in the office. (Rubio) - Discussion only

UNFINISHED BUSINESS:

COMMITTEE REPORTS:

7. Capital Improvement Program Committee (Carapiet/Arias-Montez)
8. Finance & Fiscal Oversight Committee (Arias-Montez/Snyder)
9. Governance Committee (Snyder/Benediktsson)
10. Personnel Committee (Snyder/Carapiet)
11. Ad Hoc Committee – Paradise Drive (Carapiet/Benediktsson)

OTHER BUSINESS:

ENVIRONMENTAL:

12. CARB (California Air Resources Board) Advanced Clean Fleet Regulations "Accelerating Zero Emission Truck Markets".

CORRESPONDENCE:

INFORMATIONAL ITEMS:

13. Receipt of SD5 GASB 75 Disclosures for Fiscal Year Ending June 30, 2023 based on OPEB (Other Post Employment Benefits) Valuation as of June 30, 2022- Prepared by GovInvest

14. Receipt of SD5 CalPERS Miscellaneous Plan (Classic Members 2.7%@55) Annual Valuation report as of June 30, 2022

15. Receipt of SD5 CalPERS PEPRA Plan (PEPRA Members 2.0%@62) Annual Valuation report as of June 30, 2022

ADJOURNMENT:

The Board will be asked to adjourn the meeting to a Regular Board Meeting on October 19, 2023, at 5:00 P.M.

At its discretion, the Board of Directors may consider the above-agenda items out of the order in which they appear currently. Accessible public meetings: Upon request, the District will provide written agenda materials in appropriate alternate formats, or disability-related modification or accommodation, including auxiliary aids or services to enable individual with disabilities to participate in public meetings. Please submit written requests to the District at P.O. Box 227, Tiburon, CA 94920 or rdohrmann@sani5.org at least two days prior to the meeting.

Regular Board Meeting Minutes
at Sanitary District No. 5 of Marin County
Thursday, August 17th, 2023

5:00 P.M. REGULAR BOARD MEETING

Teleconference Location:
Director Richard Snyder
10 Pomander Walk
Belvedere CA 94920

PURSUANT TO THE RALPH M. BROWN ACT, ALL VOTES SHALL BE BY ROLL CALL DUE TO DIRECTOR SNYDER TELECONFERENCE FROM 10 Pomander Walk Belvedere CA 94920

ROLL CALL:

Directors Present: 1700 hrs.

Omar Arias-Montez, Vice President

John Carapiet, Secretary

Richard Snyder, Director – Teleconference

Directors Not Present:

Tod Moody, President

Catharine Benediktsson, Director (attended as member of the public through teleconference at 5:05pm)

Staff Present:

Tony Rubio, District Manger

PUBLIC COMMENTS: The public is invited to address the Board on items that do not appear on the agenda and are within the subject matter jurisdiction of the Board. The Brown Act does not allow the Board to take action on any public comment. Please limit public comments to no more than three minutes.

No public comments

DIRECTORS' COMMENTS AND/OR AGENDA REQUESTS:

None

CONSENT CALENDAR:

1. Approval of July 20th, 2023 Regular Board Meeting Minutes
2. Review and receive all electronic fund transfers (EFTs) and approve warrants from July 14th, 2023, through August 10, 2023, (JP Morgan Chase Bank, check no. 9906 through check no. 9956, all transactions totaling $416,936.74) and receive July 2023, payroll, in the sum of $159,414.49 (Dohrmann)
3. Receipt of Financial Reports for July 2023 (Dohrmann)

Discussion by the Board. Motion (Snyder/Carapiet) to approve the Consent Calendar. Passed (3-0-0-2)

Vice President Arias-Montez moved to Item No. 5, under New Business, for consideration, as described on the agenda.

NEW BUSINESS:

5. Review the District's Current Sewer Lateral Inspection Program Notification of Compliant and Non-Compliant Sewer Laterals and discussion regarding possible additional notifications to the County of Marin Public Health Official of Non-Compliant sewer laterals that are not brought into compliance within the allowed permit time. (Rubio) – Action

Discussion by the Board. No action taken. Board direction given.

Vice President Aries-Montez moved to Item No. 4, under Management Reports, for consideration, as described on the agenda.

MANAGEMENT REPORTS

4. District Manager Summary Report (Rubio)

District Manager Rubio provided Board members with a monthly update and discussed items on the Main Plant Permit Renewal. Staff were acknowledged (past and present) for 15 years of permit compliance with the Main Plant Permit- a true team effort.

Vice President Aries-Montez moved to Item No. 6, under New Business, for consideration, as described on the agenda.

NEW BUSINESS continued:

6. Review and discuss HF&H Contract Amendment for completion of the Sewer Rate Study and for the proposed work for the upcoming connection fee update (Rubio) - Action

Discussion by the Board. Motion (Snyder/Carapiet) to approve HF&H Contract Amendment for completion of the Sewer Rate Study and for the proposed work for the upcoming connection fee. Passed (3-0-0-2)

UNFINISHED BUSINESS: None

COMMITTEE REPORTS:

7. Capital Improvement Program Committee (Carapiet/Arias-Montez) - None
8. Finance & Fiscal Oversight Committee (Arias-Montez/Snyder) - None
9. Governance Committee (Snyder/Benediktsson) - None
10. Personnel Committee (Snyder/Carapiet) - None
11. Ad Hoc Committee – Paradise Drive (Carapiet/Benediktsson) - None

OTHER BUSINESS: None

ENVIRONMENTAL:

12. SD5 Main Plant Permit Renewal - The San Francisco Bay Regional Water Quality Control Board has prepared a draft NPDES permit (tentative order) for the Sanitary District No. 5 of Marin County Main Wastewater Treatment Plant at 2001 Paradise Drive, Tiburon, Marin County for discharge of about 0.56 million gallons per day of treated wastewater to Raccoon Strait in Central San Francisco Bay through a deepwater outfall.

The Regional Water Board will hear comments on the tentative order during a meeting starting at 9:00 a.m. on October 11, 2023. The last date for written comments is 5:00 p.m. on September 13, 2023. The Regional Water Board will hear oral testimony but will not accept written comments after this date.

The tentative order can be obtained from the waterboard website at:

http://www.waterboards.ca.gov/sanfranciscobay/board_decisions/tentative_orders.html

CORRESPONDENCE: None

INFORMATIONAL ITEMS:

13. New SWRCB (State Water Resources Control Board) WDR (Waste Discharge Requirements) 2022-0103-DWQ
14. New District SSERP (Sewer Spill Emergency Response Plan)

ADJOURNMENT:

The Board adjourned the meeting at 1820 hrs (Arias-Montez/Snyder) to a Regular Board Meeting on September 21, 2023, at 5:00 P.M. Passed (3-0-0-2)

Approved:	Attest:
______________________________	______________________________
Omar Arias-Montez Vice President	John Carapiet Board Secretary

Sanitary Distr. No.5 of Marin Co.

Warrant List Summary - REVISED

August 11 through September 14, 2023

Item #1A

Num	Date	Name	Memo	Amount
JP Morgan Chase - Primary 7399				
EFT	09/14/23	CalPERS	EFT Health Premium, Cust #4163206459 - September 2023	-21,796.07
EFT	09/14/23	PERS	EFT PERS Pension - August 2023	-25,604.98
9965	09/14/23	Access Answering Service	Acct #4080C, Answering Service - September 2023	-75.90
9966	09/14/23	Alameda Electrical Distributors, Inc.	Acct #56156: Electrical parts & supplies - August 2023	-1,887.24
9967	09/14/23	AVEVA	Cust #SANI5, SCADA Sys. Maint.& IT Support Contract Renewal - ...	-13,060.00
9968	09/14/23	Alhambra	Acct #547945611762129, Water - August 2023	-482.70
9969	09/14/23	AT&T	Acct #960732-76375559 - August 2023	-676.87
9970	09/14/23	Banshee Networks, Inc.	Acct #400M14, M.P. Parts & Service - August 2023	-1,806.57
9971	09/14/23	Bay City Boiler	Acct #274428, M.P. Flue - July 2023	-3,510.00
9972	09/14/23	Brelje and Race Laboratories, Inc.	M.P./P.C. Plant Samples - July + August 2023	-3,612.00
9973	09/14/23	Bullzeye Installation	Service @ 7 M.P. Roll-up Doors - September 2023	-59,081.00
9974	09/14/23	Burke, Williams & Sorensen, LLP	Legal Advice - July 2023	-1,468.50
9975	09/14/23	BWS Distributors, Inc.	Lab Safety Supplies - August 2023	-6,436.53
9976	09/14/23	Caltest Analytical Laboratory	Acct: Tiburon5: M.P./P.C. Lab Sampling - August 2023	-597.85
9977	09/14/23	Caltronics Business Systems, Inc.	Acct #SD15, Multi-purpose Copier Contract - August 2023	-366.83
9978	09/14/23	Cintas Corporation #626	Acct #626-00821, PPE/Safetywear - August 2023	-393.92
9979	09/14/23	Comcast	Acct# 963 425 517, VOIP Service - September 2023	-374.81
9980	09/14/23	Comcast Business	Acct# 8155 30 011 0149465, Bus. Voice, Internet & Cable - Septem...	-458.48
9981	09/14/23	D&K Auto Service	SD5 Vehicle Maint. - August 2023	-3,360.11
9982	09/14/23	CSRMA California Sanitation Risk ...	File No. 3038498, D.O.L.: 9.26.2022 - August 2023	-2,829.87
9983	09/14/23	DKF Solutions Group, LLC	My Safety Officer Subscription + CalOSHA Training - August 2023	-10,830.23
9984	09/14/23	Doc Bailey Construction Equipment...	Crane Service @ M.P. Boom Truck - May 2023 (FY22-23 AJE)	-10,662.37
9985	09/14/23	Fastenal Company	CAPET0959, M.P. Supplies - August 2023	-969.33
9986	09/14/23	Grainger	Acct #810128785, M.P. Supplies - July 2023	-3,350.63
9988	09/14/23	HF&H Consultants, LLC	Consulting - June 2023 (AJE FY22-23)	-1,123.45
9989	09/14/23	Home Depot Credit Services	#6035322005164334: M.P. Supplies - June (AJE FY22-23) - August ...	-1,763.61
9990	09/14/23	Jackson's Hardware, Inc.	Acct #7601, Supplies - August 2023	-355.36
9991	09/14/23	JRL Machine & Driveline, Inc.	M.P. Digester Rehab - August 2023	-5,412.04
9992	09/14/23	Ken Grady Company, Inc.	SD5 Plant Parts - August 2023	-2,808.70
9993	09/14/23	JM Integration, LLC	M.P. Parts & Service - September 2023	-10,699.67
9994	09/14/23	Larry Walker Associates, Inc.	Tech Support for M.P. NPDES Reg. Assistance - July 2023	-3,701.75
9995	09/14/23	Lystek Int'l, LTD	Biosolids Transport - July 2023	-705.44
9996	09/14/23	Marin Water	Water: March - June 2023 (AJE FY22-23)	-1,803.17
9997	09/14/23	Martin Bros. Supply	M.P. Grounds Maint. - August 2023	-1,244.78
9998	09/14/23	McCampbell Analytical, Inc.	M.P. Monitoring, Acute Toxicity Testing - July 2023	-1,112.50
9999	09/14/23	MidAmerica	Acct#: SD5MARIN0G5, FSA + Retiree Admin Fees - 2023 (AJE FY2...	-261.00
10001	09/14/23	Mill Valley Refuse Service, Inc.	Acct #063092, SLUDGE TRANSPORT - August 2023	-3,844.00
10002	09/14/23	Mill Valley Refuse Service, Inc.	Acct #032945, Garbage Service + 1 yd rental - August 2023	-270.53
10003	09/14/23	Nute Engineering Corp.	Consulting & Engr. Srvcs - July 2023	-16,583.00
10005	09/14/23	pdblowers, Inc.	P.C. Parts & Srvc, Blowers - June 2023 (AJE FY22-23)	-1,149.41
10006	09/14/23	PTC	Cust #619101, SCADA /Modbusware Suite - September 2023	-285.00
10007	09/14/23	Roy's Sewer Service, Inc.	P&L + Small Machine Cleaning - August - September 2023	-6,520.00
10008	09/14/23	SERVICE TOOL	Cust #56156, Maint. Supplies - August 2023	-910.07
10009	09/14/23	Sewer Tek	M.P. Renovations - July - August 2023	-54,050.00
10010	09/14/23	Special District Risk Management A...	Member #7665, Life, Vision, DDS & LTD Ins - October 2023	-2,038.33
10011	09/14/23	TechAir	HVAC Replacement for heating + A/C - August 2023	-14,112.53
10012	09/14/23	ULINE	Cust ID#:24834323, M.P. Supplies - July + August 2023	-4,182.98
10013	09/14/23	Univar	Cust ID #STDT001, Chemicals - June (AJE FY22-23) - July 2023	-9,712.32
10014	09/14/23	US Bank	Acct#:4246 0445 5565 3611, July - August 2023	-23,672.22
10015	09/14/23	USABlueBook	Cust #933682, M.P. Parts & Lab Supplies - July 2023	-708.35
10016	09/14/23	Verizon Wireless	Acct #0342125502-00001: iPhones & BPS Comm - August - Septe...	-1,730.21
10017	09/14/23	Waste Management of Redwood La...	Acct #3-78482-75002, Sludge Disposal - August 2023	-6,414.97
10018	09/14/23	WorkSmart Automation, Inc.	SD5 Comm System Maintenance - August 2023	-1,110.00
10019	09/14/23	Zions Bank Corporation, N.A.	CB&T: #0001400000098948, MPR Refi - October 2023	-685,205.99
10020	09/14/23	Bilsborough, Chad	Office Furniture, Health + Wellness - September 2023	-1,127.73
10021	09/14/23	Cottrell, Rulon	Mls/Diem Travel Reimb. - September 2023	-1,427.35
10022	09/14/23	Hill, Arlee S	FY23-24 SD5 Employee Incentives - September 2023	-200.00
10023	09/14/23	La Torre, Daniel P.	Mls/Diem Travel Reimb. + FY23-24 Hlth & Wlnss Incentive - Septe...	-1,470.00
10024	09/14/23	Rosser, John	Health & Wellness: Rx glasses - September 2023	-234.97
10025	09/14/23	Rubio, Antonio	WEFTEC + CASA Seminars - August - October 2023	-910.51
10027	09/14/23	La Torre, Daniel P.	EE Incentive - September 2023	-1,000.00
10028	09/14/23	Collodi, Peter	CWEA Cllxns	-448.57
10029	09/14/23	Goodman Building Supply Co.	Acct #20070, M.P. Supplies - August 2023	-513.65
10030	09/14/23	HDR Engineering, Inc.	Consulting, SD5 MP Digester - July 2023	-2,647.05
10031	09/14/23	Owen Equipment Sales	Acct #C10655, SD5 Vactor Truck Service - July 2023	-282.69

Num	Date	Name	Memo	Amount
10032	09/14/23	Pacific Gas & Electric	Acct #2908031411-4, Utilities - August 2023	-30,788.79
10036	09/14/23	Hardiman Construction / Trenchles...	FY22-23 SD5 Sewer Rehab Project, Progress Payment #3 - Septe...	-216,870.75
Total JP Morgan Chase - Primary 7399				-1,295,106.23
TOTAL				-1,295,106.23

Sanitary Distr. No.5 of Marin Co.
Warrant List Detail - REVISED
August 11 through September 14, 2023

Item #1B

Num	Date	Name	Memo	Account	Class	Paid Amount
EFT	**09/14/23**	**CalPERS**	**EFT Health Premium, Cust #4163206459 - September 2023**	**JP Morgan Chase - Primary 7399**		
			Active Employee Health - September 2023	8020.05 · Employee Health	SD5	-20,716.58
			Retiree Health - September 2023	8022.05 · Reitree Health	SD5	-1,079.49
TOTAL						-21,796.07
EFT	**09/14/23**	**PERS**	**EFT PERS Pension - August 2023**	**JP Morgan Chase - Primary 7399**		
			Retirement August 2023 (Classic 1600 Rate): ER @ 15.95%; EE @ 8.0%	8019.05 · PERS Retirement	SD5	-14,264.76
			Retirement August 2023 (PEPRA Rate): ER @ 7.68%; EE @ 7.75%	8019.05 · PERS Retirement	SD5	-11,340.22
TOTAL						-25,604.98
9965	**09/14/23**	**Access Answering Service**	**Acct #4080C, Answering Service - September 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #30479, Answering Service re SSO & Alarm Notifications - September 2023	8510 · Data/Alarms/IT Supp & Licensing	SD5	-75.90
TOTAL						-75.90
9966	**09/14/23**	**Alameda Electrical Distrib...**	**Acct #56156: Electrical parts & supplies - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #S5630363.001+.002, #S5647324.001, #S5644537.001, S5644537.001 (PO#652180), Electrical p...	7027 · Electrical & Instrument	SD5	-1,540.02
			Inv #SS5647324.002, #S5650055.001 (PO#652180), Electrical parts & supplies - August 2023	7027 · Electrical & Instrument	SD5	-347.22
TOTAL						-1,887.24
9967	**09/14/23**	**AVEVA**	**Cust #SANI5, SCADA Sys. Maint.& IT Support Contract Renewal - September 2023 (FY23-24)**	**JP Morgan Chase - Primary 7399**		
			Quote#288825.1 - Site ID#118116, AVEVA SCADA System Top View Support renewal, 12.1.23 - 6.30...	8510 · Data/Alarms/IT Supp & Licensing	SD5	-612.50
			Quote#288825.1 - Site ID#118116, AVEVA SCADA System Top View Support renewal, 7.1.24 - 11.3...	8510 · Data/Alarms/IT Supp & Licensing	SD5	-437.50
			Quote#309299.1 - Site ID#118116, AVEVA SCADA System, Srvc Contract: licenses support renewal, ...	8510 · Data/Alarms/IT Supp & Licensing	SD5	-7,005.83
			Quote#288825.1 - Site ID#118116, AVEVA SCADA System Top View Support renewal, 7.1.24 - 11.3...	8510 · Data/Alarms/IT Supp & Licensing	SD5	-5,004.17
TOTAL						-13,060.00
9968	**09/14/23**	**Alhambra**	**Acct #547945611762129, Water - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #12012314 081823, Water - August 2023	7023 · Janitorial Supplies & Service	SD5	-470.63
			Inv #12012314 081823, Water - August 2023	7042 · Paradise Supplies & Chemicals	SD5	-12.07
TOTAL						-482.70
9969	**09/14/23**	**AT&T**	**Acct #960732-76375559 - August 2023**	**JP Morgan Chase - Primary 7399**		
			PC Plant Telephones - August 2023	8532 · Paradise Cove Telephones	SD5	-379.96
			PC Pumps & Lines Telephones - August 2023	8533 · Pumps & Lines Telephones	SD5	-7.02
			Tib Pumps & Lines Telephones - August 2023	8533 · Pumps & Lines Telephones	SD5	-289.89
TOTAL						-676.87

Num	Date	Name	Memo	Account	Class	Paid Amount
9970	**09/14/23**	**Banshee Networks, Inc.**	**Acct #400M14, M.P. Parts & Service - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #15978: SD5 IT Support/Software upgrades/software subscriptions renewals +/or Installations ...	8510 · Data/Alarms/IT Supp & Licensing	SD5	-1,806.57
TOTAL						-1,806.57
9971	**09/14/23**	**Bay City Boiler**	**Acct #274428, M.P. Flue - July 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #27273 + Inv #27424 (PO#RC754174), M.P. ER Boiler: cycling + pressure issues - July 2023	7022 · Plant Maint. Parts & Service	SD5	-3,510.00
TOTAL						-3,510.00
9972	**09/14/23**	**Brelje and Race Laborator...**	**M.P./P.C. Plant Samples - July + August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #150785 + Inv #151105: M.P. Samples - July + August 2023	7051 · Main Plant Lab Monitoring	SD5	-3,082.00
			Inv #150785 + Inv #151105: P.C. Samples - July + August 2023	7052 · Paradise Cove Monitoring	SD5	-530.00
TOTAL						-3,612.00
9973	**09/14/23**	**Bullzeye Installation**	**Service @ 7 M.P. Roll-up Doors - September 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #B-8446-A (P.O.#953651), Service @ 7 M.P. Roll-up Doors - September 2023	9201.1 · M.P. Roll-Up Doors	SD5	-59,081.00
TOTAL						-59,081.00
9974	**09/14/23**	**Burke, Williams & Sorense...**	**Legal Advice - July 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #306717, Legal Advice - July 2023	6039 · Legal	SD5	-1,468.50
TOTAL						-1,468.50
9975	**09/14/23**	**BWS Distributors, Inc.**	**Lab Safety Supplies - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #285925 (PO #IS955703), Lab Safety/ER Station Equipment - August 2023	8515 · Safety	SD5	-6,436.53
TOTAL						-6,436.53
9976	**09/14/23**	**Caltest Analytical Laborat...**	**Acct: Tiburon5: M.P./P.C. Lab Sampling - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #Y070892001, Y070892002, #Y08017001, #Y080107002, Y#080108001 - August 2023	7051 · Main Plant Lab Monitoring	SD5	-597.85
TOTAL						-597.85
9977	**09/14/23**	**Caltronics Business Syste...**	**Acct #SD15, Multi-purpose Copier Contract - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #3867280, Inv #3841022, Konica Multi-purpose copier (C308) contract - August 2023	6047 · Office Supplies	SD5	-366.83
TOTAL						-366.83

Num	Date	Name	Memo	Account	Class	Paid Amount
9978	**09/14/23**	**Cintas Corporation #626**	**Acct #626-00821, PPE/Safetywear - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #4163670483, #4164363042, #4165066378, #4165780930 - August 2023	8520 · Personal Protection/Safety Wear	SD5	-210.00
			Special Orders: Inv #1904195985 - August 2023	8520 · Personal Protection/Safety Wear	SD5	-183.92
TOTAL						-393.92
9979	**09/14/23**	**Comcast**	**Acct# 963 425 517, VOIP Service - September 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #170234004, VOIP Phone Service (14) Land Line Phones - September 2023	8531 · Main Plant Telephones	SD5	-374.81
TOTAL						-374.81
9980	**09/14/23**	**Comcast Business**	**Acct# 8155 30 011 0149465, Bus. Voice, Internet & Cable - September 2023**	**JP Morgan Chase - Primary 7399**		
			Bundle: Cable, Internet & Land Line Phones -- September 2023	8510 · Data/Alarms/IT Supp & Licensing	SD5	-325.85
			Bundle: Land Line Phones -- September 2023	8531 · Main Plant Telephones	SD5	-132.63
TOTAL						-458.48
9981	**09/14/23**	**D&K Auto Service**	**SD5 Vehicle Maint. - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #75508, #75514, #75534, #75545, #75591 (PO#954170) SD5 Fleet Maintenance - August 2023	7072 · Maintenance	SD5	-3,360.11
TOTAL						-3,360.11
9982	**09/14/23**	**CSRMA California Sanitati...**	**File No. 3038498, D.O.L.: 9.26.2022 - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #3835, File No. 3038498, D.O.L.: 9.26.2022 - August 2023	6033.3 · Insurance - SD5 Auto	SD5	-2,829.87
TOTAL						-2,829.87
9983	**09/14/23**	**DKF Solutions Group, LLC**	**My Safety Officer Subscription + CalOSHA Training - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #21477, #21514, #21531, #21584,# 21587, #21593 (PO #160861), DKF CalOSHA Safety: CBT/SE...	8515 · Safety	SD5	-10,830.23
TOTAL						-10,830.23
9984	**09/14/23**	**Doc Bailey Construction E...**	**Crane Service @ M.P. Boom Truck - May 2023 (FY22-23 AJE)**	**JP Morgan Chase - Primary 7399**		
			Inv #39291, Crane service: Boom Truck repairs & replacements at M.P. - May 2022 (FY22-23 AJE)	7072 · Maintenance	Belve...	-4,323.59
			Inv #39291, Crane service: Boom Truck repairs & replacements at M.P. - May 2022 (FY22-23 AJE)	7072 · Maintenance	Tibur...	-266.56
			Inv #39291, Crane service: Boom Truck repairs & replacements at M.P. - May 2022 (FY22-23 AJE)	7072 · Maintenance	Tiburon	-6,072.22
TOTAL						-10,662.37
9985	**09/14/23**	**Fastenal Company**	**CAPET0959, M.P. Supplies - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #65557, 66543, #66633, #66712, #66799, #66860 (PO#654038), M.P. Supplies - August 2023	7022 · Plant Maint. Parts & Service	SD5	-969.33
TOTAL						-969.33

Num	Date	Name	Memo	Account	Class	Paid Amount
9986	**09/14/23**	**Grainger**	**Acct #810128785, M.P. Supplies - July 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #9819976177 (PO# AB754186) + Inv #6603167658 (PO# AB754187), (2) IR Therms - August 2023	7025 · Lab Supplies & Chemicals	SD5	-509.68
			Inv #9808447297 (PO#AB754180), Notice Signage - August 2023	8515 · Safety	SD5	-137.56
			Inv #9829533448 (PO# WEB2455778306) Fiberglass exhaust fan - September 2023	7025 · Lab Supplies & Chemicals	SD5	-1,100.90
			Inv #9829038984, (PO#CB953691) Desicant Breathers - September 2023	7025 · Lab Supplies & Chemicals	SD5	-478.96
			Inv #9793393563 (PO#AB754173), ER Shower & Eyewash station replacement - August 2023	8515 · Safety	SD5	-1,123.53
TOTAL						-3,350.63
9988	**09/14/23**	**HF&H Consultants, LLC**	**Consulting - June 2023 (AJE FY22-23)**	**JP Morgan Chase - Primary 7399**		
			Inv #9720507, Project #W3829, SD5 Sewer Rate Study - June 2023 (AJE FY22-23)	6017 · Consulting Fees	Belve...	-455.56
			Inv #9720507, Project #W3829, SD5 Sewer Rate Study - June 2023 (AJE FY22-23)	6017 · Consulting Fees	Tibur...	-28.09
			Inv #9720507, Project #W3829, SD5 Sewer Rate Study - June 2023 (AJE FY22-23)	6017 · Consulting Fees	Belve...	-639.80
TOTAL						-1,123.45
9989	**09/14/23**	**Home Depot Credit Services**	**#6035322005164334: M.P. Supplies - June (AJE FY22-23) - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #WJ38240551665480 (PO#JT652192), Landscaping rocks - August 2023	7028 · Grounds Maintenance	SD5	-114.45
			Inv #H0657-4715973480 (PO#AB754179), Quick links & chain - August 2023	7042 · Paradise Supplies & Chemicals	SD5	-50.34
			Inv #030614 / 1033039 (PO#652187), M.P. Supplies - June 2023 (AJE FY22-23)	7021 · Plant Maintenance Supplies	Tiburon	-72.93
			Inv #030614 / 1033039 (PO#652187), M.P. Supplies - June 2023 (AJE FY22-23)	7021 · Plant Maintenance Supplies	Belve...	-102.80
			HD Credit - June 2023 (AJE FY22-23)	7021 · Plant Maintenance Supplies	Tiburon	14.84
			HD Credit - June 2023 (AJE FY22-23)	7021 · Plant Maintenance Supplies	Belve...	20.92
			WG40956526 (PO#956384) - A/C + Heat parts (PO#956384) - August 2023	7022 · Plant Maint. Parts & Service	SD5	-963.56
			WG40956526 (PO#956384) - 100 5 Gal buckets (PO#956384) - August 2023	7021 · Plant Maintenance Supplies	SD5	-262.50
			HD #8252023 (PO#953687) - Tire inflator - August 2023	7021 · Plant Maintenance Supplies	SD5	-232.79
TOTAL						-1,763.61
9990	**09/14/23**	**Jackson's Hardware, Inc.**	**Acct #7601, Supplies - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #135855 (PO#PC952174) + Inv #135968 (PO#AB135968) Supplies - August 2023	7021 · Plant Maintenance Supplies	SD5	-224.38
			Inv #135855 (PO#PC952174) Uniforms - August 2023	8520 · Personal Protection/Safety Wear	SD5	-130.98
TOTAL						-355.36
9991	**09/14/23**	**JRL Machine & Driveline, I...**	**M.P. Digester Rehab - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #2575 (PO#754189) - M.P. Screw Press Diesel Cover - August 2023	9213.1 · Digester Rehab	SD5	-5,412.04
TOTAL						-5,412.04
9992	**09/14/23**	**Ken Grady Company, Inc.**	**SD5 Plant Parts - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #5713 (PO#754172), TCL Sensors + Electrolytes - September 2023	7025 · Lab Supplies & Chemicals	SD5	-2,139.70
			Inv #5681 (PO#: RC754214), PH Sensors - July 2023	7025 · Lab Supplies & Chemicals	SD5	-669.00
TOTAL						-2,808.70

Num	Date	Name	Memo	Account	Class	Paid Amount
9993	**09/14/23**	**JM Integration, LLC**	**M.P. Parts & Service - September 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #23290 (Agrmnt #Q230415), IT hardware - August 2023	8510 · Data/Alarms/IT Supp & Licensing	SD5	-10,699.67
TOTAL						-10,699.67
9994	**09/14/23**	**Larry Walker Associates, I...**	**Tech Support for M.P. NPDES Reg. Assistance - July 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #00113.11-5, Regulatory Assistance (ROWD & Permit Renewal) - July 2023	7061 · Main Plant NPDES Renewal	SD5	-3,701.75
TOTAL						-3,701.75
9995	**09/14/23**	**Lystek Int'l, LTD**	**Biosolids Transport - July 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #153-719, Biosolids Transport to Lystek Facility (7.54WT) - July 2023	7029 · Main Plant Sludge Disposal	SD5	-705.44
TOTAL						-705.44
9996	**09/14/23**	**Marin Water**	**Water: March - June 2023 (AJE FY22-23)**	**JP Morgan Chase - Primary 7399**		
			Cust #:424793, Golden Gate BPS: March - June 2023 (AJE FY22-23)	8541 · Water	SD5	-86.63
			Cust #:424791, Cove Rd. BPS: March - June 2023 (AJE FY22-23)	8541 · Water	SD5	-86.63
			Cust #:558095, San Rafael Ave. BPS: March - June 2023 (AJE FY22-23)	8541 · Water	SD5	-90.50
			Cust #138856, Mar West TPS: March - June 2023 (AJE FY22-23)	8541 · Water	SD5	-86.63
			Cust #100098, M.P. Belvedere: March - June 2023 (AJE FY22-23)	8541 · Water	SD5	-1,452.78
TOTAL						-1,803.17
9997	**09/14/23**	**Martin Bros. Supply**	**M.P. Grounds Maint. - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #196502 (PO#652196) 1/2 yard roofing gravel @ M.P. - August 2023	7028 · Grounds Maintenance	SD5	-1,244.78
TOTAL						-1,244.78
9998	**09/14/23**	**McCampbell Analytical, Inc.**	**M.P. Monitoring, Acute Toxicity Testing - July 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #2307900, M.P. Monitoring, Acute Toxicity Testing - July 2023	7053 · Chronic Toxicity	SD5	-1,112.50
TOTAL						-1,112.50
9999	**09/14/23**	**MidAmerica**	**Acct#: SD5MARIN0G5, FSA + Retiree Admin Fees - 2023 (AJE FY22-23)**	**JP Morgan Chase - Primary 7399**		
			Financial Services Account (2 FSAs) - Q223 (AJE FY22-23)	8020.05 · Employee Health	SD5	-36.00
			Financial Services Account (7 Rets) - Q223 (AJE FY22-23)	8020.05 · Employee Health	SD5	-225.00
TOTAL						-261.00
10001	**09/14/23**	**Mill Valley Refuse Service,...**	**Acct #063092, SLUDGE TRANSPORT - August 2023**	**JP Morgan Chase - Primary 7399**		
			Sludge Transport/Exchange only: 8 loads + 1 Sludge Box delivery - August 2023	7029 · Main Plant Sludge Disposal	SD5	-3,844.00
TOTAL						-3,844.00

Num	Date	Name	Memo	Account	Class	Paid Amount
10002	**09/14/23**	**Mill Valley Refuse Service,...**	**Acct #032945, Garbage Service + 1 yd rental - August 2023**	**JP Morgan Chase - Primary 7399**		
			Garbage Service, Including 1 yd trash + 1 yd cardboard rental - August 2023	7023 · Janitorial Supplies & Service	SD5	-270.53
TOTAL						-270.53
10003	**09/14/23**	**Nute Engineering Corp.**	**Consulting & Engr. Srvcs - July 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #26762 (Job #: 9106 - Tiburon Glen Estate Plan Review) - July 2023	6017 · Consulting Fees	SD5	-627.00
			Inv #26761 (Job #: 8999 - Cove Rd. PS Improvements) - July 2023	6017 · Consulting Fees	SD5	-1,680.00
			Inv #26817 / Job #: 9005 - FY22-23 Sewer Rehab Project	6017 · Consulting Fees	SD5	-1,113.00
			Inv #26816 / Job #8999 - Cove Rd. Belvedere Pump Station	6017 · Consulting Fees	SD5	-13,163.00
TOTAL						-16,583.00
10005	**09/14/23**	**pdblowers, Inc.**	**P.C. Parts & Srvc, Blowers - June 2023 (AJE FY22-23)**	**JP Morgan Chase - Primary 7399**		
			Inv #81974 + #81786 (PO#954021) P.C. Parts & Service: (2) 33-URAI-J + (1) 36-URAI-J Blowers - Ju...	7041 · Paradise Parts & Service	Tibur...	-1,149.41
TOTAL						-1,149.41
10006	**09/14/23**	**PTC**	**Cust #619101, SCADA /Modbusware Suite - September 2023**	**JP Morgan Chase - Primary 7399**		
			Quote #Q1880909, SCADA /Modbusware Suite + Maintenance Agrmnt - September 2023	8510 · Data/Alarms/IT Supp & Licensing	SD5	-285.00
TOTAL						-285.00
10007	**09/14/23**	**Roy's Sewer Service, Inc.**	**P&L + Small Machine Cleaning - August - September 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #222572, Sm Machine Cleaning; Inv #223024, Cleared sewer line @ 101 Bella Vista - August 2023	7011 · Pumps & Lines Maintenance	SD5	-6,520.00
TOTAL						-6,520.00
10008	**09/14/23**	**SERVICE TOOL**	**Cust #56156, Maint. Supplies - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #S5614210.001, S5614210.003 (PO#753069), Maintenance Supplies - August 2023	7021 · Plant Maintenance Supplies	SD5	-685.04
			Inv #S5614210.002, S5614210.004 (PO#753069), Grounds Maintenance - August 2023	7028 · Grounds Maintenance	SD5	-225.03
TOTAL						-910.07
10009	**09/14/23**	**Sewer Tek**	**M.P. Renovations - July - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #2020-1086 M.P. Trash enclosure improvement - July thru August 2023	7022 · Plant Maint. Parts & Service	SD5	-3,500.00
			Inv #2020/1086, M.P. Shop rplcmnt project - July thru August 2023	9217.1 · FY23-24 Shop Rehab	SD5	-30,000.00
			Inv #2020-1087, Pipe bursting + reconnect sewer lines + manholes @ 20 Eucalyptus, Belvedere	7013 · Emergency Line Repair	SD5	-20,550.00
TOTAL						-54,050.00
10010	**09/14/23**	**Special District Risk Mana...**	**Member #7665, Life, Vision, DDS & LTD Ins - October 2023**	**JP Morgan Chase - Primary 7399**		
			Life, Vision, DDS & LTD Ins - Inv #H42711 - October 2023	8020.05 · Employee Health	SD5	-2,038.33
TOTAL						-2,038.33

Num	Date	Name	Memo	Account	Class	Paid Amount
10011	**09/14/23**	**TechAir**	**HVAC Replacement for heating + A/C - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #001 (PO#DL954037) re HVAC Replacement for heating + A/C - August 2023	9510 · Undesignated Cap - M.P.	SD5	-14,112.53
TOTAL						-14,112.53
10012	**09/14/23**	**ULINE**	**Cust ID#:24834323, M.P. Supplies - July + August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #166864427 (PO#AB754175), Inv #166565613 (PO#CB953682) MP Supplies - July + August 2023	9217.1 · FY23-24 Shop Rehab	SD5	-4,182.98
TOTAL						-4,182.98
10013	**09/14/23**	**Univar**	**Cust ID #STDT001, Chemicals - June (AJE FY22-23) - July 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #51438759 (PO #AB754185) Sodium Bisulfite 25% ($1.4750/Gal) - September 2023	7024 · Main Plant Chemicals	SD5	-9,712.32
TOTAL						-9,712.32
10014	**09/14/23**	**US Bank**	**Acct#:4246 0445 5565 3611, July - August 2023**	**JP Morgan Chase - Primary 7399**		
			Zoom - July / August 2023	6018.1 · Meetings & Travel	SD5	-87.97
			Local Travel (Fastrak + CM Tow) - July / August 2023	6018.1 · Meetings & Travel	SD5	-266.02
			Seminars + Accomodations + Airfare (TR + RC + DL) Tri-State Seminar - July/August 2023	6018.1 · Meetings & Travel	SD5	-10,571.60
			WEF & CWEA (TR) - July / August 2023	6025 · Dues & Subscriptions	SD5	-564.00
			Home Depot (TR) M.P. Supplies- July / August 2023	7021 · Plant Maintenance Supplies	SD5	-536.28
			Spiral H2O Technology - July / August 2023	7022 · Plant Maint. Parts & Service	SD5	-3,286.85
			#0822/9545: Amazon - lab supplies - July / August 2023	7025 · Lab Supplies & Chemicals	SD5	-362.48
			#0822/#9545: Sequoia Landscape - M.P. front Landscaping - July 2023	7028 · Grounds Maintenance	SD5	-273.13
			Safety Training (CMC Rescue) - July 2023	8515 · Safety	SD5	-7,723.89
TOTAL						-23,672.22
10015	**09/14/23**	**USABlueBook**	**Cust #933682, M.P. Parts & Lab Supplies - July 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #00116837 (PO#AB754182), Bio Sanitizer Tabs - August 2023	7025 · Lab Supplies & Chemicals	SD5	-444.86
			Inv #00109962 (PO#AB655735) + Inv #00115025 (PO#754184), Various Scrapers - August 2023	7025 · Lab Supplies & Chemicals	SD5	-252.61
			Inv #00115031 (PO#AB754184) - Hach LDPE Dropper - August 2023	7025 · Lab Supplies & Chemicals	SD5	-10.88
TOTAL						-708.35
10016	**09/14/23**	**Verizon Wireless**	**Acct #0342125502-00001: iPhones & BPS Comm - August - September 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #9934368494: Monthly SD5 EE Cell phone Charges - August - September 2023	8531 · Main Plant Telephones	SD5	-1,604.00
			Inv #9934368494: Monthly Charges for BPS + P.C. Telephone lines - August - September 2023	8532 · Paradise Cove Telephones	SD5	-126.21
TOTAL						-1,730.21
10017	**09/14/23**	**Waste Management of Re...**	**Acct #3-78482-75002, Sludge Disposal - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #0108381-1507-8, Sludge Disposal - 9 pick-ups @ 56.3 tons - August 2023	7029 · Main Plant Sludge Disposal	SD5	-2,446.24
			Inv #0108806-1507-4, Sludge Disposal - 7 pick-ups @ 56.3 tons - September 2023	7029 · Main Plant Sludge Disposal	SD5	-3,968.73
TOTAL						-6,414.97

Num	Date	Name	Memo	Account	Class	Paid Amount
10018	**09/14/23**	**WorkSmart Automation, Inc.**	**SD5 Comm System Maintenance - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #5330, SCADA TopView troubleshootTopView alarm, SCADA + Aveva - August 2023	8510 · Data/Alarms/IT Supp & Licensing	SD5	-1,110.00
TOTAL						-1,110.00
10019	**09/14/23**	**Zions Bank Corporation, N...**	**CB&T: #0001400000098948, MPR Refi - October 2023**	**JP Morgan Chase - Primary 7399**		
			#0001400000098948 - MPR Refi Pmt - Principal due 10.01.2023 (B: 35.22%)	9734 · MPR Refi - Principal	SD5	-214,842.00
			#0001400000098948 - MPR Refi Pmt - Principal due 10.01.2023 (T: 64.78%)	9734 · MPR Refi - Principal	SD5	-395,158.00
			#0001400000098948 - MPR Refi Pmt - Interest due 10.01.2023 (B: 35.22%)	9735 · MPR Refi - Interest	SD5	-26,487.55
			#0001400000098948 - MPR Refi Pmt - Interest due 10.01.2023(T: 64.78%)	9735 · MPR Refi - Interest	SD5	-48,718.44
TOTAL						-685,205.99
10020	**09/14/23**	**Bilsborough, Chad**	**Office Furniture, Health + Wellness - September 2023**	**JP Morgan Chase - Primary 7399**		
			Office chair + chair floormat (Staples) - September 2023	6047 · Office Supplies	SD5	-327.73
			FY23-24 Health + Wellness: Apple Watch - September 2023	8021.05 · EE Health & Wellness	SD5	-600.00
			FY23-24 Boot Allowance: $200.00 - September 2023	8515.01 · Boot Allowance	SD5	-200.00
TOTAL						-1,127.73
10021	**09/14/23**	**Cottrell, Rulon**	**Mls/Diem Travel Reimb. - September 2023**	**JP Morgan Chase - Primary 7399**		
			Travel Reimbs: 6 Day re Meals/Diem @ Tri-state Conference, NV: 8.6.23 - 8.11.2023	6018.1 · Meetings & Travel	SD5	-270.00
			Rental car + parking @ Tri-state Conference, NV: 8.6.2023 - 8.11.2023	6018.1 · Meetings & Travel	SD5	-1,157.35
TOTAL						-1,427.35
10022	**09/14/23**	**Hill, Arlee S**	**FY23-24 SD5 Employee Incentives - September 2023**	**JP Morgan Chase - Primary 7399**		
			FY23-24 Boot Allowance ($200.00 max)	8515.01 · Boot Allowance	SD5	-200.00
TOTAL						-200.00
10023	**09/14/23**	**La Torre, Daniel P.**	**Mls/Diem Travel Reimb. + FY23-24 Hlth & Wlnss Incentive - September 2023**	**JP Morgan Chase - Primary 7399**		
			Travel Reimbs: 6 Day re Meals/Diem @ Tri-state Conference, NV: 8.6.23 - 8.11.2023	6018.1 · Meetings & Travel	SD5	-870.00
			FY23-24 Exercise equipment re Health & Wellness - 9.6.2023	8021.05 · EE Health & Wellness	SD5	-600.00
TOTAL						-1,470.00
10024	**09/14/23**	**Rosser, John**	**Health & Wellness: Rx glasses - September 2023**	**JP Morgan Chase - Primary 7399**		
			FY23-24 Eye Protection Allowance - September 2023	8515.02 · Eye Protection Allowance	SD5	-234.97
TOTAL						-234.97

Num	Date	Name	Memo	Account	Class	Paid Amount
10025	**09/14/23**	**Rubio, Antonio**	**WEFTEC + CASA Seminars - August - October 2023**	**JP Morgan Chase - Primary 7399**		
			Reimbursement for Travel Expenses 2023 CASA Seminar - rental car (San Diego) - 8.9.2023 - 8.12.20...	6018.1 · Meetings & Travel	SD5	-52.71
			Reimbursement for Travel (Meals/Diem) Expenses 2023 CASA Seminar (San Diego) - 8.9.2023 - 8.12...	6018.1 · Meetings & Travel	SD5	-180.00
			Reimbursement for Travel Airfare Expenses 2023 WEFTEC (Chicago) - 10.1.2023 - 10.4.2023	6018.1 · Meetings & Travel	SD5	-397.80
			Reimbursement for Travel (Meals/Diem) Expenses 2023 WEFTEC (Chicago) - 10.1.2023 - 10.4.2023	6018.1 · Meetings & Travel	SD5	-180.00
			Reimbursement for Travel Transprotation Reimbursement 2023 WEFTEC (Chicago) - 10.1.2023 - 10....	6018.1 · Meetings & Travel	SD5	-100.00
TOTAL						-910.51
10027	**09/14/23**	**La Torre, Daniel P.**	**EE Incentive - September 2023**	**JP Morgan Chase - Primary 7399**		
			EE Incentive: CSU,Sac - Membrane Bioreactors (Cert #: 630023) - September 2023	8005 · Employee Incentives	SD5	-1,000.00
TOTAL						-1,000.00
10028	**09/14/23**	**Collodi, Peter**	**CWEA Cllxns**	**JP Morgan Chase - Primary 7399**		
			CWEA Collection I - September 2023	6020 · Continuing Education	SD5	-387.00
			Standby Mileage - September 2023	6018.2 · Standby Mileage Expense Reimb	SD5	-61.57
TOTAL						-448.57
10029	**09/14/23**	**Goodman Building Supply...**	**Acct #20070, M.P. Supplies - August 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #875553 (PO#JT652193). Inv #875142 (PO#JT652191), Inv#876294 (PO#PC952175) Grounds M...	7028 · Grounds Maintenance	SD5	-425.07
			Inv #876485 (PO #RH754103) M.P. Supplies - August 2023	7021 · Plant Maintenance Supplies	SD5	-88.58
TOTAL						-513.65
10030	**09/14/23**	**HDR Engineering, Inc.**	**Consulting, SD5 MP Digester - July 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #1200537413, HDR Consulting, SD5 M.P. Digester Rehab & Cleaning - July 2023	9213 · M.P. Digester	SD5	-2,647.05
TOTAL						-2,647.05
10031	**09/14/23**	**Owen Equipment Sales**	**Acct #C10655, SD5 Vactor Truck Service - July 2023**	**JP Morgan Chase - Primary 7399**		
			Inv #00060643 (PO#: DL954637), Vactor Truck Ignition Switch - July 2023	7072 · Maintenance	SD5	-282.69
TOTAL						-282.69
10032	**09/14/23**	**Pacific Gas & Electric**	**Acct #2908031411-4, Utilities - August 2023**	**JP Morgan Chase - Primary 7399**		
			Acct #2908031411-4, SD5 Utilities - August 2023	8542 · Main Plant Utilities	SD5	-10,018.63
			Acct #2908031411-4, P.C. Plant Utilities - August 2023	8543 · Paradise Cove Utilities	SD5	-2,347.05
			Acct #2908031411-4, SD5 Pump St Utilities - August 2023	8544 · Pump Station Utilities	SD5	-14,122.64
			Acct #2908031411-4, P.C. Pump St Utilities - August 2023	8544 · Pump Station Utilities	SD5	-4,300.47
TOTAL						-30,788.79

Num	Date	Name	Memo	Account	Class	Paid Amount
10036	**09/14/23**	**Hardiman Construction / T...**	**FY22-23 SD5 Sewer Rehab Project, Progress Payment #3 - September 2023**	**JP Morgan Chase - Primary 7399**		
			Belvedere PP#3:FY22-23 SD5 Sewer Rehab Project, Progress Payment #3 - September 2023 (40%)	9304 · Belvedere Sewer Line Rehab Prog	SD5	-91,085.72
			Belvedere Less Retention #2 re Progress Payment #3 - September 2023 (40%)	Retainage Payable	SD5	4,337.42
			Tiburon PP#3:FY22-23 SD5 Sewer Rehab Project, Progress Payment #3 - September 2023 (60%)	9301 · Tiburon Sewer Line Rehab Prog	SD5	-136,628.57
			Tiburon Less Retention #2 re Progress Payment #3 - September 2023 (60%)	Retainage Payable	SD5	6,506.12
TOTAL						-216,870.75

Sanitary Distr. No.5 of Marin Co.
Comparative Balance Sheet
As of August 31, 2023

Item #2A

	Aug 31, 23	Jul 31, 23	$ Change
ASSETS			
Current Assets			
Checking/Savings			
JP Morgan Chase - Payroll 7506	63,959.49	73,963.02	-10,003.53
JP Morgan Chase - Primary 7399	1,162,029.54	539,966.83	622,062.71
JP Morgan Chase - Transfer 7522	662,120.15	311,365.23	350,754.92
Local Agency Investment Fund			
Belvedere			
Belvedere Capital & CIP Reserve	4,585,323.71	4,585,323.71	0.00
Belvedere Disaster RecoveryFund	356,250.00	356,250.00	0.00
Belvedere Operating	1,159,193.96	1,159,193.96	0.00
Belvedere Operating Reserve	516,923.05	516,923.05	0.00
Belvedere PERS Retirement Trust	356,250.00	356,250.00	0.00
Total Belvedere	6,973,940.72	6,973,940.72	0.00
Tiburon			
Tiburon Capital & CIP Reserve	5,139,742.28	5,139,742.28	0.00
Tiburon Disaster Recovery Fund	643,750.00	643,750.00	0.00
Tiburon Operating	-88,464.92	1,426,535.08	-1,515,000.00
Tiburon Operating Reserve	683,930.00	683,930.00	0.00
Tiburon PERS Retirement Trust	643,750.00	643,750.00	0.00
Total Tiburon	7,022,707.36	8,537,707.36	-1,515,000.00
Total Local Agency Investment Fund	13,996,648.08	15,511,648.08	-1,515,000.00
Total Checking/Savings	15,884,757.26	16,436,943.16	-552,185.90
Accounts Receivable	0.00	25,528.05	-25,528.05
Other Current Assets	881.92	881.92	0.00
Total Current Assets	15,885,639.18	16,463,353.13	-577,713.95
Fixed Assets	19,118,200.30	19,118,200.30	0.00
TOTAL ASSETS	**35,003,839.48**	**35,581,553.43**	**-577,713.95**
LIABILITIES & EQUITY			
Liabilities	6,771,301.03	6,771,301.03	0.00
Equity			
3900 · Net Assets	28,998,345.64	28,998,345.64	0.00
Net Income	-765,807.19	-188,093.24	-577,713.95
Total Equity	28,232,538.45	28,810,252.40	-577,713.95
TOTAL LIABILITIES & EQUITY	**35,003,839.48**	**35,581,553.43**	**-577,713.95**

Sanitary Distr. No.5 of Marin Co.
Annual Budget vs Actual Expenses - REVISED
July 2023 through June 2024

Item #2B

	Jul '23 - Jun 24	Budget	$ Over Budget	% of Bu...
Ordinary Income/Expense				
Income				
5000 · Property Taxes / AD VALOREM				
5001.2 · TEETER	4,818.52	905,000.00	-900,181.48	0.5%
5002 · UNSEC	0.00	15,000.00	-15,000.00	0.0%
5003 · PUNS / PRIOR UNSECURED	0.00	1,500.00	-1,500.00	0.0%
5004 · REDEMPTION / RDMPT	321.20	0.00	321.20	100.0%
5006 · SPLU	0.00	0.00	0.00	0.0%
5041 · SUPSEC	1,428.58	20,000.00	-18,571.42	7.1%
5043 · SECU	0.00	0.00	0.00	0.0%
5046 · Excess ERAF	0.00	255,314.00	-255,314.00	0.0%
5280 · HOPTR	0.00	3,000.00	-3,000.00	0.0%
5483 · Other tax	0.00	7,000.00	-7,000.00	0.0%
Total 5000 · Property Taxes / AD VALOREM	6,568.30	1,206,814.00	-1,200,245.70	0.5%
5007 · Sewer Service Charge				
5007.1 · Sewer Service - Tiburon Ops	11,879.14	4,861,118.00	-4,849,238.86	0.2%
5007.2 · Sewer Service-Belv Ops	7,578.44	0.00	7,578.44	100.0%
5007.3 · Sewer Service-Belv Cap	2,346.05	0.00	2,346.05	100.0%
5007.4 · Other User Fees	0.00	38,700.00	-38,700.00	0.0%
5007.5 · Sewer Service - Tiburon Cap	0.00	246,296.00	-246,296.00	0.0%
Total 5007 · Sewer Service Charge	21,803.63	5,146,114.00	-5,124,310.37	0.4%
5201 · Interest				
5201.1 · Interest County of Marin	565.07	0.00	565.07	100.0%
5201.2 · Interest LAIF	117,321.71	100,000.00	17,321.71	117.3%
Total 5201 · Interest	117,886.78	100,000.00	17,886.78	117.9%
5900.10 · Paradise Sewer Line Ext. Fees	0.00	15,479.10	-15,479.10	0.0%
5900.3 · Connection Fees				
5900.30 · Connection Permit Fees	1,600.00	16,250.00	-14,650.00	9.8%
5900.31 · Collection	27,461.00	200,000.00	-172,539.00	13.7%
5900.34 · Treatment	31,565.00	200,000.00	-168,435.00	15.8%
Total 5900.3 · Connection Fees	60,626.00	416,250.00	-355,624.00	14.6%
5900.4 · Inspection Permit Fees	2,100.00	16,250.00	-14,150.00	12.9%
5900.5 · SASM Expense Reimb.	25,528.05	75,000.00	-49,471.95	34.0%
5900.9 · Other Income	0.00	100.00	-100.00	0.0%
Total Income	234,512.76	6,976,007.10	-6,741,494.34	3.4%
Gross Profit	234,512.76	6,976,007.10	-6,741,494.34	3.4%
Expense				
6000 · Administrative Expenses				
6001 · Advertising	0.00	2,000.00	-2,000.00	0.0%
6002 · Outreach & Newsletter	0.00	0.00	0.00	0.0%
6008 · Audit & Accounting	2,453.28	40,000.00	-37,546.72	6.1%
6017 · Consulting Fees	30,057.15	100,000.00	-69,942.85	30.1%
6018 · Travel & Meetings				
6018.1 · Meetings & Travel	17,308.51	15,000.00	2,308.51	115.4%
6018.2 · Standby Mileage Expense Reimb	368.86	8,000.00	-7,631.14	4.6%
Total 6018 · Travel & Meetings	17,677.37	23,000.00	-5,322.63	76.9%
6020 · Continuing Education	2,843.50	10,000.00	-7,156.50	28.4%
6021 · County Fees	3,356.05	16,590.00	-13,233.95	20.2%
6024 · Director Fees	4,800.00	9,000.00	-4,200.00	53.3%
6025 · Dues & Subscriptions	3,062.80	33,000.00	-29,937.20	9.3%
6026 · Elections	0.00	0.00	0.00	0.0%
6033 · Insurance				
6033.1 · Insurance - SD5 Property	63,641.62	100,000.00	-36,358.38	63.6%
6033.2 · Insurance - SD5 Liability	0.00	60,000.00	-60,000.00	0.0%
6033.3 · Insurance - SD5 Auto	6,334.87	10,000.00	-3,665.13	63.3%
Total 6033 · Insurance	69,976.49	170,000.00	-100,023.51	41.2%

Sanitary Distr. No.5 of Marin Co.
Annual Budget vs Actual Expenses
July 2023 through June 2024

	Jul '23 - Jun 24	Budget	$ Over Budget	% of Bu...
6039 · Legal	4,338.50	50,000.00	-45,661.50	8.7%
6047 · Office Supplies	1,719.50	11,000.00	-9,280.50	15.6%
6056 · Postage	0.00	1,300.00	-1,300.00	0.0%
6059 · Pollution Prevention/Public Edu	0.00	5,500.00	-5,500.00	0.0%
6065 · Miscellaneous Expense	0.00	0.00	0.00	0.0%
Total 6000 · Administrative Expenses	140,284.64	471,390.00	-331,105.36	29.8%
7000 · Ops & Maintenance Expenses				
7010 · Pumps & Lines Maintenance				
7011 · Pumps & Lines Maintenance	13,490.23	200,000.00	-186,509.77	6.7%
7013 · Emergency Line Repair	20,550.00	100,000.00	-79,450.00	20.6%
Total 7010 · Pumps & Lines Maintenance	34,040.23	300,000.00	-265,959.77	11.3%
7020 · Main Plant Maintenance				
7021 · Plant Maintenance Supplies	10,641.74	80,000.00	-69,358.26	13.3%
7022 · Plant Maint. Parts & Service	72,744.49	300,000.00	-227,255.51	24.2%
7023 · Janitorial Supplies & Service	1,703.05	10,000.00	-8,296.95	17.0%
7024 · Main Plant Chemicals	22,219.51	165,000.00	-142,780.49	13.5%
7025 · Lab Supplies & Chemicals	13,748.04	25,000.00	-11,251.96	55.0%
7027 · Electrical & Instrument	6,996.90	30,000.00	-23,003.10	23.3%
7028 · Grounds Maintenance	2,282.46	8,000.00	-5,717.54	28.5%
7029 · Main Plant Sludge Disposal	23,906.25	55,000.00	-31,093.75	43.5%
Total 7020 · Main Plant Maintenance	154,242.44	673,000.00	-518,757.56	22.9%
7040 · Paradise Cove Plant Maint				
7041 · Paradise Parts & Service	15,490.21	20,000.00	-4,509.79	77.5%
7042 · Paradise Supplies & Chemicals	3,959.72	6,500.00	-2,540.28	60.9%
7043 · Paradise Sludge Disposal	0.00	3,000.00	-3,000.00	0.0%
Total 7040 · Paradise Cove Plant Maint	19,449.93	29,500.00	-10,050.07	65.9%
7050 · Monitoring				
7051 · Main Plant Lab Monitoring	11,055.87	50,000.00	-38,944.13	22.1%
7052 · Paradise Cove Monitoring	937.45	10,000.00	-9,062.55	9.4%
7053 · Chronic Toxicity	4,142.50	15,000.00	-10,857.50	27.6%
Total 7050 · Monitoring	16,135.82	75,000.00	-58,864.18	21.5%
7060 · Permits/Fees				
7061 · Main Plant NPDES Renewal	13,675.25	0.00	13,675.25	100.0%
7062 · Permits/Fees - General	3,272.15	50,000.00	-46,727.85	6.5%
7063 · Paradise Cove Permits/Fees	0.00	9,000.00	-9,000.00	0.0%
7064 · Paradise Cove NPDES Renewal	0.00	0.00	0.00	0.0%
Total 7060 · Permits/Fees	16,947.40	59,000.00	-42,052.60	28.7%
7070 · Truck Maintenance				
7071 · Fuel	3,775.80	20,000.00	-16,224.20	18.9%
7072 · Maintenance	15,011.77	30,000.00	-14,988.23	50.0%
Total 7070 · Truck Maintenance	18,787.57	50,000.00	-31,212.43	37.6%
Total 7000 · Ops & Maintenance Expenses	259,603.39	1,186,500.00	-926,896.61	21.9%
8000 · Salaries and Benefits Expenses				
8001 · Salaries	262,525.09	1,598,548.00	-1,336,022.91	16.4%
8003 · Overtime	18,846.47	100,000.00	-81,153.53	18.8%
8004 · Standby Pay	12,457.13	80,000.00	-67,542.87	15.6%
8005 · Employee Incentives	20,000.00	60,000.00	-40,000.00	33.3%
8006 · Vacation Buyout	19,793.68	80,000.00	-60,206.32	24.7%
8013 · Payroll Taxes	20,277.01	110,000.00	-89,722.99	18.4%
8015 · Payroll/Bank Fees	1,354.52	7,000.00	-5,645.48	19.4%
8016 · Car Allowance	6,000.00	6,000.00	0.00	100.0%
8019 · PERS Retirement				
8019.05 · PERS Retirement	55,736.73	272,332.00	-216,595.27	20.5%
8019.08 · PERS Retirement - CalPERS UAL	0.00	0.00	0.00	0.0%
Total 8019 · PERS Retirement	55,736.73	272,332.00	-216,595.27	20.5%

Sanitary Distr. No.5 of Marin Co.
Annual Budget vs Actual Expenses
July 2023 through June 2024

	Jul '23 - Jun 24	Budget	$ Over Budget	% of Bu...
8020 · Employee Health				
8020.05 · Employee Health	47,809.15	290,000.00	-242,190.85	16.5%
8021 · Employee Health Deductions	-786.74	0.00	-786.74	100.0%
Total 8020 · Employee Health	47,022.41	290,000.00	-242,977.59	16.2%
8022 · Retiree Health				
8022.05 · Reitree Health	2,158.98	80,144.00	-77,985.02	2.7%
8022.10 · CERBT/OPEB Annual Arc Contribtn	0.00	140,000.00	-140,000.00	0.0%
Total 8022 · Retiree Health	2,158.98	220,144.00	-217,985.02	1.0%
8023 · Workers Comp Insurance	48,373.00	58,000.00	-9,627.00	83.4%
Total 8000 · Salaries and Benefits Expenses	514,545.02	2,882,024.00	-2,367,478.98	17.9%
8500 · Other Operating Expenses				
8510 · Data/Alarms/IT Supp & Licensing	45,952.24	100,000.00	-54,047.76	46.0%
8515 · Safety	49,336.22	60,000.00	-10,663.78	82.2%
8520 · Personal Protection/Safety Wear	1,560.59	15,000.00	-13,439.41	10.4%
8530 · Telephone				
8531 · Main Plant Telephones	3,609.94	11,000.00	-7,390.06	32.8%
8532 · Paradise Cove Telephones	975.82	500.00	475.82	195.2%
8533 · Pumps & Lines Telephones	1,367.94	7,000.00	-5,632.06	19.5%
Total 8530 · Telephone	5,953.70	18,500.00	-12,546.30	32.2%
8540 · Utilities				
8541 · Water	4,221.98	9,000.00	-4,778.02	46.9%
8542 · Main Plant Utilities	49,732.28	230,000.00	-180,267.72	21.6%
8543 · Paradise Cove Utilities	6,478.68	22,000.00	-15,521.32	29.4%
8544 · Pump Station Utilities	27,368.88	48,000.00	-20,631.12	57.0%
Total 8540 · Utilities	87,801.82	309,000.00	-221,198.18	28.4%
Total 8500 · Other Operating Expenses	190,604.57	502,500.00	-311,895.43	37.9%
Total Expense	1,105,037.62	5,042,414.00	-3,937,376.38	21.9%
Net Ordinary Income	-870,524.86	1,933,593.10	-2,804,117.96	-45.0%
Other Income/Expense				
Other Expense				
9100 · Capital Expenditures				
9200 · Main Plant Equipment Capital				
9201.1 · M.P. Roll-Up Doors	59,081.00	75,000.00	-15,919.00	78.8%
9201.2 · M.P. Corrosion Protection	0.00	150,000.00	-150,000.00	0.0%
9208 · M.P. Chem Feed Trx Pump Rplcmnt	19,382.74	0.00	19,382.74	100.0%
9213 · M.P. Digester				
9213.1 · Digester Rehab	11,807.57	600,000.00	-588,192.43	2.0%
Total 9213 · M.P. Digester	11,807.57	600,000.00	-588,192.43	2.0%
9216 · M.P. Secondary Clarifier				
9216.1 · Scum Removal Project FY22-23	0.00	300,000.00	-300,000.00	0.0%
Total 9216 · M.P. Secondary Clarifier	0.00	300,000.00	-300,000.00	0.0%
9217 · SD5 Shop Rplcmnt /Ops Control				
9217.1 · FY23-24 Shop Rehab	42,512.21	100,000.00	-57,487.79	42.5%
Total 9217 · SD5 Shop Rplcmnt /Ops Control	42,512.21	100,000.00	-57,487.79	42.5%
9229.8 · Vehicle Replacement	58,971.50			
Total 9200 · Main Plant Equipment Capital	191,755.02	1,225,000.00	-1,033,244.98	15.7%
9300 · Pumps & Lines Capital				
9301 · Tiburon Sewer Line Rehab Prog	136,628.57	0.00	136,628.57	100.0%
9303 · CCTV Sewer Project	0.00	250,000.00	-250,000.00	0.0%
9304 · Belvedere Sewer Line Rehab Prog	91,085.72	0.00	91,085.72	100.0%
9305 · Valve/Wet Well Replacements				
9305.2 · Tiburon Wet Well Rehab	0.00	50,000.00	-50,000.00	0.0%
Total 9305 · Valve/Wet Well Replacements	0.00	50,000.00	-50,000.00	0.0%

Sanitary Distr. No.5 of Marin Co.
Annual Budget vs Actual Expenses
July 2023 through June 2024

	Jul '23 - Jun 24	Budget	$ Over Budget	% of Bu...
9306 · PS Pump & Valve Replacements	0.00	100,000.00	-100,000.00	0.0%
9309 · BPS #1 Generator Replcmnt	0.00	600,000.00	-600,000.00	0.0%
9313 · Manholes/Rodholes	5,000.00	75,000.00	-70,000.00	6.7%
Total 9300 · Pumps & Lines Capital	232,714.29	1,075,000.00	-842,285.71	21.6%
9400 · Paradise Cove Capital				
9407 · P.C. Pump Replacement	0.00	25,000.00	-25,000.00	0.0%
9408 · P.C. Access Rd Imprvmnts	0.00	100,000.00	-100,000.00	0.0%
Total 9400 · Paradise Cove Capital	0.00	125,000.00	-125,000.00	0.0%
9500 · Undesignated Capital				
9510 · Undesignated Cap - M.P.	14,112.53	50,000.00	-35,887.47	28.2%
9520 · Undesignated Cap - P.C. Plant	0.00	25,000.00	-25,000.00	0.0%
9530 · Undesignated Cap - P & L	0.00	50,000.00	-50,000.00	0.0%
Total 9500 · Undesignated Capital	14,112.53	125,000.00	-110,887.47	11.3%
Total 9100 · Capital Expenditures	438,581.84	2,550,000.00	-2,111,418.16	17.2%
9700 · Debt Service				
9730 · Debt Service - MPR Project				
9730.01 · MPR Loan - Principal	0.00	595,000.00	-595,000.00	0.0%
9730.02 · MPR Loan - Interest	0.00	157,790.00	-157,790.00	0.0%
9734 · MPR Refi - Principal	610,000.00			
9735 · MPR Refi - Interest	75,205.99			
Total 9730 · Debt Service - MPR Project	685,205.99	752,790.00	-67,584.01	91.0%
Total 9700 · Debt Service	685,205.99	752,790.00	-67,584.01	91.0%
Total Other Expense	1,123,787.83	3,302,790.00	-2,179,002.17	34.0%
Net Other Income	-1,123,787.83	-3,302,790.00	2,179,002.17	34.0%
Net Income	**-1,994,312.69**	**-1,369,196.90**	**-625,115.79**	**145.7%**

Sanitary Distr. No.5 of Marin Co.
Monthly O.T. Report - REVISED
August 2023

Item #2C

Type	Date	Num	Name	Memo	Amount	Balance
Alvarez, Joel						
Check	08/15/23	540	Alvarez, Joel	24.00 Hrs. O.T. @ 1.5x	1,770.84	1,770.84
Total Alvarez, Joel					1,770.84	1,770.84
Balf, Abigail						
Check	08/15/23	541	Balf, Abigail	1.50 Hrs. O.T. @ 1.5x	95.60	95.60
Check	08/29/23	557	Balf, Abigail	03.75 Hrs. O.T. @ 1.5x	239.01	334.61
Check	08/29/23	557	Balf, Abigail	05.00 Hrs. O.T. @ 2.0x	42.49	377.10
Total Balf, Abigail					377.10	377.10
Bilsborough, Chad						
Check	08/15/23	542	Bilsborough, Chad	04.00 Hrs O.T. @ 1.5x	2,765.73	2,765.73
Check	08/15/23	542	Bilsborough, Chad	12.00 Hrs. O.T. @ 2.0x	271.15	3,036.88
Check	08/29/23	558	Bilsborough, Chad	05.00 Hrs O.T. @ 1.5x	406.73	3,443.61
Total Bilsborough, Chad					3,443.61	3,443.61
Collodi, Peter						
Check	08/15/23	543	Collodi, Peter	08.50 Hrs. O.T. @ 1.5x	515.99	515.99
Check	08/29/23	559	Collodi, Peter	03.50 Hrs. O.T. @ 1.5x	212.47	728.46
Total Collodi, Peter					728.46	728.46
Cottrell, Rulon						
Check	08/15/23	544	Cottrell, Rulon	09.00 Hrs. O.T. @ 1.5x	1,430.81	1,430.81
Check	08/15/23	544	Cottrell, Rulon	01.50 Hrs. O.T. @ 2.0x	534.17	1,964.98
Total Cottrell, Rulon					1,964.98	1,964.98
Dohrmann, Robin						
Check	08/29/23	561	Dohrmann, Robin	13.00 Hrs. O.T. @ 1.5x	1,285.44	1,285.44
Total Dohrmann, Robin					1,285.44	1,285.44
Hage, Ross M.						
Check	08/29/23	563	Hage, Ross M.	0.75 Hrs. Comp Time	28.91	28.91
Total Hage, Ross M.					28.91	28.91
La Torre, Daniel P.						
Check	08/29/23	565	La Torre, Daniel P.	02.00 Hrs. O.T. @ 1.5x	207.66	207.66
Check	08/29/23	565	La Torre, Daniel P.	03.00 Hrs. O.T. @ 2.0x	415.32	622.98
Total La Torre, Daniel P.					622.98	622.98
TOTAL					**10,222.32**	**10,222.32**

CASH FLOW CHART

SANITARY DISTRICT NO. 5 OF MARIN COUNTY: July 2023

SD5
Beginning Balance:
$16,704,294.41

LAIF Beginning Balance:
$16,394,326.37

#1: LAIF
Income: $0.00
Interest: $117,321.71
W/D: ($0.00)

LAIF Ending Balance:
$15,511,648.08

CHASE Transfer
Beginning Balance:
$458,183.15

#2: CHASE Transfer
Income: $28,182.08
W/D: ($175,000)

CHASE Transfer
Ending Balance:
$311,365.23

CHASE Payroll
Beginning Balance:
$69,339.56

#3: CHASE Payroll
Income: $175,000.00
W/D: ($164,750.63)

CHASE Payroll
Ending Balance:
$79,588.93

CHASE Primary
Beginning Balance:
$782,445.33

#5: CHASE PRIMARY
Income: $31,760.00
W/D EFTS: ($23,494.85)
W/D Checks: ($222,891.78)
***Uncleared Checks: $26,559.65**

***NSF Customer Checks**
Returned: $0

CHASE PRIMARY
Ending Balance:
$567,818.70

CalPERS Pension
Accrued Liability:
$ 10,802,390.00
As of 6.30.2021

CalPERS
Market Value Assets:
$11,792,705.00
As of 6.30.2021

SD5
Ending Balance:
$16,470,420.94

CalPERS CERBT/OPEB
Beginning Balance:
$1,259,652.12

CalPERS CERBT/OPEB
Ending Balance:
$1,280,470.16

MPR REFI
Loan Balance: $6,065,000

CASH FLOW CHART

SANITARY DISTRICT NO. 5 OF MARIN COUNTY: August 2023

SD5
Beginning Balance:
$16,470,420.94

LAIF Beginning Balance:
$15,511,648.08

#1: LAIF
Income: $0.00
Interest: $1,515,000.00
W/D: ($0.00)

LAIF Ending Balance:
$13,996,648.08

CHASE Transfer
Beginning Balance:
$311,365.23

#2: CHASE Transfer
Income: $1,515,189.85
W/D: ($1,530,000.00)

CHASE Transfer
Ending Balance:
$296,555.08

CHASE Payroll
Beginning Balance:
$79,588.93

#3: CHASE Payroll
Income: $130,000.00
W/D: ($167,687.00)

CHASE Payroll
Ending Balance:
$42,045.56

CHASE Primary
Beginning Balance:
$567,818.7

#5: CHASE PRIMARY
Income: $1,433,204.05
W/D EFTS: ($ 48,527.34)
W/D Checks: ($370,059.21)
***Uncleared Checks: $26,559.65**
***NSF Customer Checks Returned: $0**

CHASE PRIMARY
Ending Balance:
$1,582,436.20

CalPERS Pension Accrued Liability:
$ 10,802,390.00
As of 6.30.2021

CalPERS Market Value Assets:
$11,792,705.00
As of 6.30.2021

SD5
Ending Balance:
$15,917,685.11

CalPERS CERBT/OPEB Beginning Balance:
$1,280,470.16

CalPERS CERBT/OPEB Ending Balance:
$1,263,623.13

MPR REFI
Loan Balance: $6,065,000

NOTICE OF AUTOMATIC PAYMENT

PAYCHEX

Paychex of New York LLC
1535 Scenic Avenue Suite 100
Costa Mesa CA 92626

Client # 0082 Y400-2116
Invoice # 2023071201

AUTOMATIC PAYMENT $344.23

This amount will be deducted from the following bank account at or after 12:01 A.M on 7/14/23.

XXXXXXXXXXXXXX506

ADDRESS SERVICE REQUESTED

0082 Y400-2116
SANITARY DISTRICT NO 5
2001 Paradise Dr
Tiburon, California 94920-1937

For questions regarding your account, please call (844) 729-9247

ACCOUNT SUMMARY	AMOUNT
Previous Balance on Invoice#2023062801 Due 06/30/23	334.98
Payment Received - Thank You	-334.98
Balance Forward	0.00
Total New Charges	344.23
Account Balance (Includes Balance Forward, New Charges, and Pending Automatic Payments)	**344.23**

CHECK DATE	DESCRIPTION OF SERVICE	PROCESSING DATE	# TRANSACTIONS	AMOUNT
	NEW CHARGES			
07/14/23	Paychex Productivity	07/12/23	15	364.50
	Quarter End Delivery			4.00
	Delivery		1	16.54
	Client Discount			-40.81
	Total New Charges			344.23
	Automatic Payment (Includes New Charges and applicable credits from Balance Forward above)			**344.23**

Thank you for choosing Paychex.

CASH REQUIREMENTS

CASH REQUIRED FOR NEGOTIABLE CHECKS &/OR ELECTRONIC FUNDS TRANSFERS (EFT) FOR CHECK DATE 07/14/23: $86,749.93

IMPORTANT COVID-19 INFORMATION: If you filed IRS Form 7200, please notify your Paychex representative to avoid owing a balance at the end of the quarter and ensure your Form 941 is accurate.

TRANSACTION SUMMARY

SUMMARY BY TRANSACTION TYPE -

TOTAL ELECTRONIC FUNDS TRANSFER (EFT)	86,749.93
CASH REQUIRED FOR NEGOTIABLE CHECKS &/OR EFT	**86,749.93**
TOTAL REMAINING DEDUCTIONS / WITHHOLDINGS / LIABILITIES	10,177.80
CASH REQUIRED FOR CHECK DATE 07/14/23	96,927.73

TRANSACTION DETAIL

ELECTRONIC FUNDS TRANSFER - *Your financial institution will initiate transfer to Paychex* ***at or after 12:01 A.M.*** *on transaction date.*

TRANS. DATE	BANK NAME	ACCOUNT NUMBER	PRODUCT	DESCRIPTION		BANK DRAFT AMOUNTS & OTHER TOTALS
07/13/23	JPMORGAN CHASE BANK,	xxxxxxxxxxxxxx506	Direct Deposit	Net Pay Allocations	60,474.47	**60,474.47**
07/13/23	JPMORGAN CHASE BANK,	xxxxxxxxxxxxxx506	Taxpay®	Employee Withholdings		
				Social Security	5,556.90	
				Medicare	1,299.61	
				Fed Income Tax	8,722.23	
				CA Income Tax	3,717.85	
				Total Withholdings	**19,296.59**	
				Employer Liabilities		
				Social Security	5,556.90	
				Medicare	1,299.61	
				Fed Unemploy	2.90	
				CA Disability	101.60	
				CA Unemploy	17.38	
				CA Emp Train	0.48	
				Total Liabilities	**6,978.87**	**26,275.46**
					EFT FOR 07/13/23	**86,749.93**
					TOTAL EFT	**86,749.93**

REMAINING DEDUCTIONS / WITHHOLDINGS / LIABILITIES - *Paychex does not remit these funds. You must ensure accurate and timely payment of applicable items.*

TRANS. DATE	BANK NAME	ACCOUNT NUMBER	PRODUCT	DESCRIPTION		TOTAL
07/14/23	Refer to your records for account Information		Payroll	Employee Deductions		
				401A Member Contribu	4,514.07	
				Calpers 457B Roth	1,012.00	
				Calpers 457B TRDL	1,834.06	
				Med 125	194.61	

NOTICE OF AUTOMATIC PAYMENT

PAYCHEX

Paychex of New York LLC
1535 Scenic Avenue Suite 100
Costa Mesa CA 92626

Client # 0082 Y400-2116
Invoice # 2023072701

AUTOMATIC PAYMENT $334.98

This amount will be deducted from the following bank account at or after 12:01 A.M on 7/31/23.

XXXXXXXXXXXXXX506

ADDRESS SERVICE REQUESTED

0082 Y400-2116
SANITARY DISTRICT NO 5
2001 Paradise Dr
Tiburon, California 94920-1937

For questions regarding your account, please call (844) 729-9247

	ACCOUNT SUMMARY			AMOUNT
	Previous Balance on Invoice#2023071201 Due 07/14/23			344.23
	Payment Received - Thank You			-344.23
	Balance Forward			0.00
	Total New Charges			334.98
	Account Balance (Includes Balance Forward, New Charges, and Pending Automatic Payments)			**334.98**
CHECK DATE	**DESCRIPTION OF SERVICE**	**PROCESSING DATE**	**# TRANSACTIONS**	**AMOUNT**
	NEW CHARGES			
07/31/23	Paychex Productivity	07/27/23	14	358.60
	Delivery		1	16.54
	Client Discount			-40.16
	Total New Charges			334.98
	Automatic Payment (Includes New Charges and applicable credits from Balance Forward above)			**334.98**

Thank you for choosing Paychex.

CASH REQUIREMENTS

(Prior to Processing)

CASH REQUIRED FOR NEGOTIABLE CHECKS &/OR ELECTRONIC FUNDS TRANSFERS (EFT) FOR CHECK DATE 07/31/23: $71,985.35

IMPORTANT COVID-19 INFORMATION: If you filed IRS Form 7200, please notify your Paychex representative to avoid owing a balance at the end of the quarter and ensure your Form 941 is accurate.

TRANSACTION SUMMARY

SUMMARY BY TRANSACTION TYPE -

TOTAL ELECTRONIC FUNDS TRANSFER (EFT)	71,985.35
CASH REQUIRED FOR NEGOTIABLE CHECKS &/OR EFT	**71,985.35**
TOTAL REMAINING DEDUCTIONS / WITHHOLDINGS / LIABILITIES	10,169.47
CASH REQUIRED FOR CHECK DATE 07/31/23	82,154.82

TRANSACTION DETAIL

ELECTRONIC FUNDS TRANSFER - *Your financial institution will initiate transfer to Paychex **at or after 12:01 A.M.** on transaction date.*

TRANS. DATE	BANK NAME	ACCOUNT NUMBER	PRODUCT	DESCRIPTION		BANK DRAFT AMOUNTS & OTHER TOTALS
07/28/23	JPMORGAN CHASE BANK,	xxxxxxxxxxxxxx506	Direct Deposit	Net Pay Allocations	45,285.36	**45,285.36**
07/28/23	JPMORGAN CHASE BANK,	xxxxxxxxxxxxxx506	Taxpay®	Employee Withholdings		
				Social Security	4,706.40	
				Medicare	1,100.69	
				Fed Income Tax	10,517.07	
				CA Income Tax	4,452.00	
				Total Withholdings	**20,776.16**	
				Employer Liabilities		
				Social Security	4,706.38	
				Medicare	1,100.69	
				Fed Unemploy	2.16	
				CA Disability	101.27	
				CA Unemploy	12.97	
				CA Emp Train	0.36	
				Total Liabilities	**5,923.83**	**26,699.99**
					EFT FOR 07/28/23	**71,985.35**
					TOTAL EFT	**71,985.35**

REMAINING DEDUCTIONS / WITHHOLDINGS / LIABILITIES - *Paychex does not remit these funds. You must ensure accurate and timely payment of applicable items.*

TRANS. DATE	BANK NAME	ACCOUNT NUMBER	PRODUCT	DESCRIPTION		TOTAL
07/31/23	Refer to your records for account Information		Payroll	Employee Deductions		
				401A Member Contribu	4,565.70	
				Calpers 457B Roth	1,012.00	
				Calpers 457B TRDL	1,838.13	
				Med 125	194.61	

CASH REQUIREMENTS

CASH REQUIRED FOR NEGOTIABLE CHECKS &/OR ELECTRONIC FUNDS TRANSFERS (EFT) FOR CHECK DATE 07/31/23: $71,985.35

REMAINING DEDUCTIONS / WITHHOLDINGS / LIABILITIES (cont.) - *Paychex does not remit these funds. You must ensure accurate and timely payment of applicable items.*

TRANS. DATE	BANK NAME	ACCOUNT NUMBER	PRODUCT	DESCRIPTION		TOTAL
07/31/23	Refer to your records for account Information		Payroll	Employee Deductions **(cont.)**		
				Med FSA EE Pretax	127.00	
				Total Deductions	**7,737.44**	
				Other Items		
				457 ER	2,432.03	
				TOTAL OTHER ITEMS	**2,432.03**	
				TOTAL REMAINING DEDUCTIONS / WITHHOLDINGS / LIABILITIES		**10,169.47**

PAYCHEX WILL MAKE THESE TAX DEPOSIT(S) ON YOUR BEHALF - *This information serves as a record of payment.*

DUE DATE	PRODUCT	DESCRIPTION	
08/04/23	Taxpay®	FED IT PMT Group	22,131.23
08/04/23	Taxpay®	CA IT PMT Group	4,553.27

Sanitary District No. 5 of Marin County

District Management Report

August 2023

Contents:

Transmittal Memo

Date:	September 21, 2023
To:	Board of Directors
From:	Tony Rubio, District Manager
Subject:	Management Report for August 2023

Fiscal Status

Period Covered:	July 1, 2023 –September 21, 2023
Percent of Fiscal Year:	16.6%
Percent of Budgeted Income to Date:	3.4%
Percent of Budgeted Expenditures to Date:	21.9% (operating only) (AJE 22-23 still underway)

Personnel

Separations:	None
New Hires:	None
Promotions:	None
Recruitment Activities:	None

Regulatory Compliance

MP Collection System WDR Compliance:	Full Compliance with all regulations
PC Collection System WDR Compliance:	Full Compliance with all regulations
MP NPDES Permit Compliance:	Full Compliance with all regulations
PC NPDES Permit Compliance:	Full Compliance with all regulations
BAAQMD Compliance:	Full Compliance with all regulations
Significant Comments:	None

Summary of Operational Highlights are on the following pages.

Significant Events for the Month of August 2023 Include:

Financial/Budgetary/Business Administration

- Business Server file clean up ongoing.
- Quickbooks Clean Up Scheduled to Begin in September (historical data)
- Upstairs shop files relocated next to scanning room/DM office for proper scanning and recycling that is consistent with the Districts records retention policy. 50 boxes to be removed off site for scanning and disposal- 25 boxes currently in the process of being scanned/filed and disposed of if records retention policy allows.

HR and Personnel

- Received Staff Climate Survey RFPs , the District is currently recruiting for an operator- Item will be brought back to the board for consideration once District is fully staffed

Continuing Education and Safety Training

- Work with DKF solutions on District safety program updates on-going
- Confined Space Entry and Rescue Training Completed (see pics below)

Collection System Performance

Main Plant Tiburon/Belvedere:

- Submitted no spill report for the month of July to RWQCB on CIWQS
- Rodder and Vactor work continues being performed by staff
- 0 Odor complaints for reporting period

Paradise Cove:

- Submitted No Spill report for month of July to RWQCB on CIWQS.

Treatment Plant Performance

Paradise Cove:

- New blowers ordered for air supply to extended aeration/activated sludge package plant.

Main Plant:

- Submitted July 2023 Monthly SMR and DMR to the RWQCB on CIWQS.

- NPDES Permit renewal- Tentative order on regional board calendar for October 2023 consideration of adoption.

Pollution Prevention Activities

- District to participate in 2nd annual Get Ready to Go 94920 event on October 14, 2023 at Zelinsky Park between 11am-3pm. (Emergency Preparedness Event)
- Have been asked to participate in the County of Marin Wastewater Surveillance Program– staff working on getting set up to receive sampling containers and instructions for providing samples to 3rd party firm (Verily)

Capital Improvement Projects

- 2022 Sewer Rehab - Project completed- awaiting final progress payment from contractor
- Cove Road MCC and Generator replacement project design underway Site layout plans under review – priority for discussions with City of Belvedere
- Digester Rehab Project 60% design work and plan comments being reviewed by Engineering staff for next update.
- New Service truck (moving up CIP schedule) discussed at CIP committee in reference to current service truck and advanced clean fleet regulations from CARB. (California Air Resources Board) Clean Fleet Regulations included as environmental item.
- Working on putting together scope of work for CCTV/II investigation work for further fine tuning of the Districts CIP Program

Glossary of Terms

- **B.O.D. (Biochemical Oxygen Demand):** Measurement of the effluent's capacity to consume dissolved oxygen to stabilize all remaining organic matter. The permit limits for our effluent for discharge into San Francisco bay require that we remove 85% influent B.O.D. and meet a weekly average of less than 45mg/l and a monthly average of less than 30 mg/l B.O.D.
- **TSS (Total Suspended Solids):** Measurement of suspended solids in the effluent. Our permit requires that we move at least 85% of the influent TSS and that the effluent limit is less than 45 mg/l as a weekly average and less than 30 mg/l as a monthly average.

- **Chlorine Residual:** The plant effluent is disinfected with hypochlorite (chlorine "bleach") and then the residual chlorine is neutralized with sodium bisulfite to protect the bay. The effluent chlorine residual limit is 0.0 mg/l which we monitor continuously.
- **pH:** pH is a measurement of acidity with pH 7.0 being neutral and higher pH values being basic and lower pH values being acidic. Our permit effluent pH must stay within the range of 6.0-9.0, which we monitor continuously.
- **Coliform:** Coliform bacteria are the indicator organism for determination of the efficiency of the disinfection process. The lab culture samples of our effluent and the presence of coliform is an indication that pathogenic organisms may be present. This is reported as MPN/100 (number of coliform bacteria in 100 milliliters sample).
- **Flow Through Bioassay:** A 96 hour test in which we test the toxicity of our effluent to tiny fish (sticklebacks) in a flow through tank to determine the survivability under continuous exposure to our effluent. Our permit requires that we maintain a 90th percentile survival of at least 70% and an 11 sample median survival of at least 90%. In layman's terms, this means that out of the last 11 samples only one bioassay may fall below 70% survival and the middle value when all 11 samples are placed in numerical order must be at least 90%.
- **Metals Analysis:** Our permit requires that we analyze our effluent for many different metals on a monthly basis. We have permit limits for some metals. The metals are stated as a daily max and a monthly average limit. The daily max limit is the number we cannot exceed on any sample and the monthly average applies to all samples collected in any month (although usually we are only required to take one).
- **F.O.G. (Fats, oils and grease):** Quarterly we are required to monitor our effluent for Fats, Oils and Grease.

Glossary of terms continued…

- **Headworks:** The point where all raw wastewater enters the treatment plant. In this building wastewater goes through 3 grinders to grind up all large objects that could possibly damage our influent and sludge pumps further down the treatment process.
- **Primary Sedimentation:** The next treatment process is a physical treatment process where solids that settle or float are removed and sent to the digesters for further processing.
- **Activated Sludge:** Next is the activate sludge process. This process is a biological wastewater treatment process that uses microorganisms to speed up the

decomposition of wastes. When activated sludge is added to wastewater, the microorganisms feed and grow on waste particles in the wastewater. As the organisms grow and reproduce, more and more waste is removed, leaving the wastewater partially cleaned. To function efficiently, the mass of organisms needs a steady balance of food and oxygen. These tasks are closely monitored by the operations staff.

- **Secondary Clarification:** Next is secondary clarification, like primary sedimentation/clarification, this also is a physical treatment process where solids that settle or float are removed and sent to the next treatment process. The difference between Secondary Clarification and primary sedimentation is that the solids removed from the secondary clarifiers goes to 2 places. Some goes to waste to the DAFT and some goes back to the activated sludge process for further treatment. (*Microorganisms must be returned to the activated sludge process to keep an equal balance of food and microorganisms*).
- **DAFT (dissolved air floatation thickener):** Next is the DAFT. The dissolved air floatation thickening process uses air bubbles to thicken WAS(waste active sludge) solids removed from the secondary clarifier, by floating solids to the tank surface, where they are removed and sent to the digesters for final processing.
- **Sludge Digestion:** In the anaerobic digestion process, all the organic material removed from the primary sedimentation tanks and DAFT's are digested by anaerobic bacteria. The end products are methane, carbon dioxide, water and neutralized organic matter.
- **Solids Handling:** This is the process where all the neutralized sludge from the digester is finally treated. Sludge from the digester is pumped to the screw press where it is conditioned with a polymer (chemical that reacts with the sludge to remove the water from the sludge and bind the sludge particles together) in order to dewater the sludge and produce a dry cake for final disposal to the Redwood landfill.

Glossary of terms continued…

- **Disinfection:** This is the end point for the wastewater- at this point wastewater flows through the chlorine contact tank. This contact tank allows for enough contact time for chlorine solution to disinfect the wastewater. Sodium bisulfite is introduced at the end of the tank to neutralize any residual chlorine to protect the bay.
- **MLSS (mixed liquor suspended solids):** Suspended solids in the mixed liquor of an aeration tank measured in mg/l
- **MCRT (mean cell resident time):** An expression of the average time that a microorganism will spend in the activated sludge process.

- **SVI (sludge volume index):** This is a calculation used to indicate the settling ability of activated sludge in the secondary clarifier.
- **RAS (return activated sludge):** The purpose of returning activated sludge, is to maintain a sufficient concentration of activated sludge in the aeration tank.
- **WAS (waste activated sludge):** To maintain a stable process, the amount of solids added each day to the activated sludge process are removed as WAS. We track this by our MCRT which averages 3 days
- **TWAS (thickened waste activated sludge):** The WAS is thickened in the DAFT and the thickened sludge is then pumped to the digester.
- **MPN (most probable number):** Concentrations of total coliform bacteria are reported as the most probable number. The MPN is not the absolute count of the bacteria but a statistical estimate of their concentration.
- **Bio-solids:** Anaerobic digested sludge is pumped to a screw press where excess water is removed to reduce the volume (and weight) thus producing an end result called bio-solids.
- **Polymer:** Organic polymers are added to digested sludge to bring out the formation of larger particles by bridging to improve processing.

Wastewater Acronyms

ACWA	Assoc of California Water Agencies	**APWA**	American Public Works Association
AWWA	American Water Works Association	**BAAQMD**	Bay Area Air Quality Management District
BACWA	Bay Area Clean Water Agencies	**BAPPG**:	Bay Area Pollution Prevention Group
CASA	California Association of Sanitation Agencies	**CSDA**	California Special Districts Association
CSRMA:	California Sanitation Risk Management Authority	**CAAQS**	California Ambient Air Quality Standard
CalARP	California Accidental Release Prevention Program	**CARB**	California Air Resources Board
CDO	Cease and Desist Order	**CECs**	Constituents of Emerging Concern
CEQA	California Environmental Quality Act	**CIWQS**	California Integrated Water Quality System
CFR	Code of Federal Regulations	**CMOM**	Capacity, Management, Operation and Maintenance
CIWMB	California Integrated Waste Management Board		
CIWQS	California Integrated Water Quality System	**CPUC**	California Public Utilities Commission
CSO	Combined Sewer Overflow	**CTR**	California Toxics Rule
CWA	Clean Water Act	**CWAP**	Clean Water Action Plan
CWARA	Clean Water Authority Restoration Act	**CWEA**	California Water Environment Association
DHS	Dept. of Health Services	**DTSC**	Dept. of Toxic Substances Control

EBEP	Enclosed Bays and Estuaries Plan	**EDW**	Effluent Dominated Water body
EIS/EIR	Environmental Impact Statement/Report	**EPA**	Environmental Protection Agency
ERAF	Educational Reserve Augmentation Fund	**ESMP**	Electronic Self-Monitoring Report
FOG	Fats, Oils and Grease	**GASB**	Government Accounting Standards Board
ISWP	Inland Surface Waters Plan	**JPA**	Joint Powers Authority
LAFCO	Local Agency Formation Commission	**LOCC**	League of California Cities
MACT	Maximum Achievable Control Technology (air controls)	**MCL**	Maximum Contaminant Level
MMP	Mandatory Minimum Penalty	**MOU**	Memorandum of Understanding
MUN	Municipal Drinking Water Use	**NACWA**	National Association of Clean Water Agencies
NGOs	Non-Governmental Organizations	**NOX**	Nitrogen Oxides
NPDES	Nat'l Pollutant Discharge Elimination System	**NRDC**	Natural Resources Defense Council
NTR	National Toxics Rule	**OWP**:	Office of Water Programs
OSHA:	Occupational Safety and Health Administration	**PCBs**	Poly Chlorinated Biphenyls
POTWs	Publicly Owned Treatment Works	**PPCPs**	Pharmaceutical and personal Care Products
QA/QC	Quality Assurance / Quality Control	**Region**	IX Western Region of EPA (CA, AZ, NV & HI)
RFP	Request For Proposals	**RMP**	Risk Management Program
RFQ	Request For Qualifications	**RWQCB**	Regional Water Quality Control Board
SEP	Supplementary Environmental Projects	**SIP**	State Implementation Policy (CTR/NTR criteria)
SFEI:	San Francisco Estuary Institute	**SRF**	State Revolving Fund
SSO	Sanitary Sewer Overflow	**SSMP**	Sewer System Management Plan
SWRCB	State Water Resources Control Board	**TMDL**	Total Maximum Daily Load
WDR	Waste Discharge Requirements	**WEF**	Water Environment Federation
WERF	Water Environment Research Foundation	**WET**	Whole Effluent Toxicity or Waste Extraction Test
WMI	Watershed Management Initiative	**WRFP**	Water Recycling Funding Program
WRDA	Water Resource Development Act	**WWTP**	Wastewater Treatment Plant
WQBEL	Water Quality Based Effluent Limitation	**WWWIFA**	Water & Wastewater Infrastructure Financing Agency

WULFF, HANSEN & CO.
ESTABLISHED 1931
100 SMITH RANCH ROAD, SUITE 330
SAN RAFAEL, CALIFORNIA 94903
(415) 421-8900

September 1, 2023

Tony Rubio, District Manager/Chief Plant Operator
Sanitary District No. 5 of Marin County
2001 Paradise Drive
Tiburon, CA 94920

Dear Mr. Rubio,

With short-term U.S. Treasury securities now yielding more than 5%, perhaps the Sanitary District No. 5 of Marin County would be interested in investing some of its funds in a laddered portfolio of U.S. Treasury securities through the Wulff Hansen U.S. Treasury Program.

U.S. Treasury securities are among the safest and most liquid investments in the world.

Attached is a brief description of our U.S. Treasury Program.

Please call or email us at your convenience to learn more about our program.

Very truly yours,
Steven Gortler

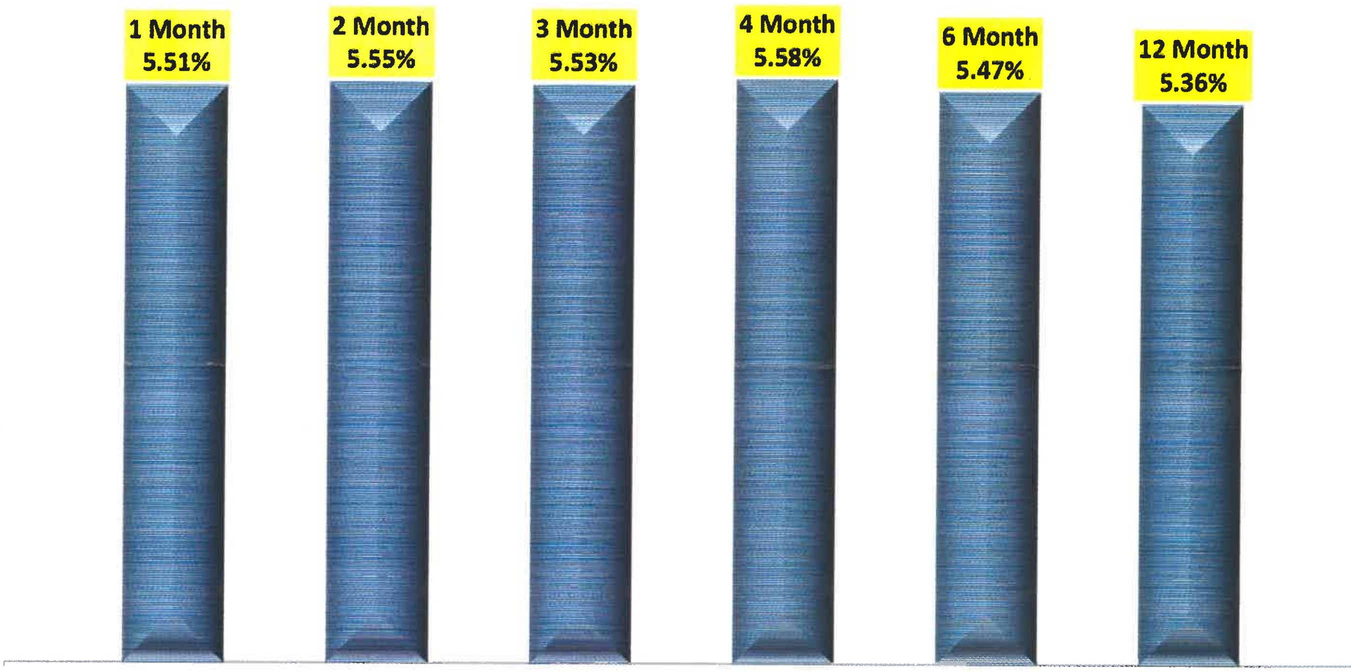
Steven Gortler
(415) 298-3319
steven.gortler@wulffhansen.com

Wulff, Hansen & Co.
100 Smith Ranch Road, Suite 330
San Rafael, CA 94903

cc: Rob Pankratz, Wulff Hansen

Invest in U.S. Treasury Securities for Safety, Liquidity and Yield

U.S. Treasury Yields as of September 1, 2023*



The Wulff Hansen U.S. Treasury Program

U.S. Treasury securities are among the safest and most liquid investments in the world.

A laddered portfolio of U.S. Treasury securities is:

- ✓ Simple and easy to understand,
- ✓ Inexpensive to create and maintain, and
- ✓ Easy to modify and track performance.

And in today's high interest rate environment, a laddered portfolio of U.S. Treasury securities provides a very desirable yield.

For more information about our U.S. Treasury Program please contact:

Steven Gortler
(415) 298-3319
Steven.Gortler@WulffHansen.com

Rob Pankratz
(415) 202-6681
RPankratz@WulffHansen.com

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San Rafael, CA 94903
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www.wulffhansen.com

WULFF, HANSEN & CO.
ESTABLISHED 1931

* *Source: U.S. Department of the Treasury*

CALIFORNIA
AIR RESOURCES BOARD

Advanced Clean Fleets Regulation Summary

Accelerating Zero-Emission Truck Markets

DATE May 17, 2023

CONTACT

Advanced Clean Fleets

Email zevfleet@arb.ca.gov

Phone (866) 634-3735

CATEGORIES

Topics On-Road Heavy-Duty Vehicles

Programs Advanced Clean Fleets

The California Air Resources Board (CARB or Board) adopted the Advanced Clean Fleets regulation in April 2023. The Office of Administrative Law (OAL) has not yet approved the regulation; however, this fact sheet provides information as adopted by the Board and that would go into effect when approved by OAL.

The following information summarizes the Advanced Clean Fleets (ACF) regulation, which is one part of a broader strategy to deploy medium- and heavy-duty zero-emission vehicles (ZEV) everywhere feasible.

Accelerating Zero-Emission Truck Markets

The Advanced Clean Fleets (ACF) regulation is part of the California Air Resources Board's (CARB or Board) overall approach to accelerate a large-scale transition to zero-emission medium- and heavy-duty vehicles. This regulation works in conjunction with the Advanced Clean Trucks (ACT) regulation, approved March 2021, which helps ensure that zero-emission vehicles (ZEV) are brought to market. More information on the ACT regulation is available in this *fact sheet*. The ACF regulation is critical to achieving both our health protective ambient air quality standards and the climate goals established *Governor's Executive Order N-79-20*. This regulation is expected to save $26.5 billion in statewide health benefits from criteria pollutant emissions and a net cost savings of $48 billion to fleets. The following information summarizes the ACF regulation, which complements the ACT regulation, and is a part of a broader strategy to deploy medium- and heavy-duty ZEVs everywhere feasible.

Which fleets does the ACF regulation affect?

The ACF regulation applies to fleets performing drayage operations, those owned by State, local, and federal government agencies, and high priority fleets. High priority fleets are entities that own, operate, or direct at least one vehicle in California, and that have either $50 million or more in gross annual revenues, or that own, operate, or have common ownership or control of a total of 50 or more vehicles (excluding light-duty package delivery vehicles). The regulation affects medium- and heavy-duty on-road vehicles with a gross vehicle weight rating greater than 8,500 pounds, off-road yard tractors, and light-duty mail and package delivery vehicles.

What are the different components of ACF?

- **Manufacturer sales mandate.** Manufacturers may sell only zero-emission medium- and heavy-duty vehicles starting in 2036.
- **Drayage fleets.** Beginning January 1, 2024, trucks must be registered in the CARB Online System to conduct drayage activities in California. Non-zero-emission "legacy" drayage trucks may register in the CARB Online System through December 31, 2023. Legacy drayage trucks can continue to operate through their minimum useful life. Beginning January 1, 2024, only zero-emission drayage trucks may register in the CARB Online System. All drayage trucks entering seaports and intermodal railyards would be required to be zero-emission by 2035.

- **High priority and federal fleets.** High priority and federal fleets must comply with the Model Year Schedule or may elect to use the optional ZEVMilestones Option to phase-in ZEVs into their fleets:
  - Model Year Schedule: Fleets must purchase only ZEVs beginning 2024 and, starting January 1, 2025, must remove internal combustion engine vehicles at the end of their useful life as specified in the regulation.
  - ZEVMilestones Option (Optional): Instead of the Model Year Schedule, fleets may elect to meet ZEV targets as a percentage of the total fleet starting with vehicle types that are most suitable for electrification. The schedule is laid out in Table 1.
- **State and local agencies.** State and local government fleets, including city, county, special district, and State agency fleets, are required to ensure 50 percent of vehicle purchases are zero-emission beginning in 2024 and 100 percent of vehicle purchases are zero-emission by 2027. Small government fleets (those with 10 or fewer vehicles) and those in designated counties must start their ZEV purchases beginning in 2027. Alternately, State and local government fleet owners may elect to meet ZEV targets using the ZEV Milestones Option as shown in Table 1. State and local government fleets may purchase either ZEVs or near-ZEVs, or a combination of ZEVs and near-ZEVs, until 2035. Starting in 2035, only ZEVs will meet the requirements.

What is the ZEV Milestones Option?

Fleets that fall under the High Priority and Federal Fleets or the State and Local Government Fleets parts of ACF may choose to use the ZEV Milestones Option, shown in Table 1, to meet their ZEV targets.

Table 1: ZEV Fleet Milestones by Milestone Group and Year

Percentage of vehicles that must be zero-emission	10%	25%	50%	75%	100%
Milestone Group 1: Box trucks, vans, buses with two axles, yard tractors, light-duty package delivery vehicles	2025	2028	2031	2033	2035 and beyond

Milestone Group 2: Work trucks, day cab tractors, buses with three axles	2027	2030	2033	2036	2039 and beyond
Milestone Group 3: Sleeper cab tractors and specialty vehicles	2030	2033	2036	2039	2042 and beyond

How will this regulation affect existing trucks or equipment?

The ACF regulation will transition fleets to ZEVs over the course of the upcoming decades and guarantees a full useful life. The ACF regulation's default Model Year Schedule begins in 2024, and allows drayage and high priority and federal fleets to continue using their existing trucks until the earlier of 18 years or 800,000 miles or a minimum of 13 years if the truck has over 800,000 miles. State and local government fleets have no requirement to end the use of their existing compliant vehicles. This means affected fleets may keep their existing combustion-powered vehicles for the full useful life provided by *Senate Bill 1* (Beall, Statutes 2017, Chapter 5) under the Model Year Schedule. As an alternative to the Model Year Schedule, the ZEV Milestones Option is phased-in over almost two decades and allows fleets full flexibility to manage their fleet composition over the phase-in period, as long as the ZEV Milestones targets are met.

What if there isn't a zero-emission truck to replace what a fleet needs?

There are over a hundred ZEV models available now and more are coming as manufacturers begin to ramp up their sales. However, the High Priority and Federal Fleets and the State and Local Government Fleets requirements include an exemption for cases in which a ZEV is not available for purchase and is needed to comply. The ZEV Purchase Exemption allows a fleet owner to purchase a new internal combustion engine vehicle and exclude it from the internal combustion engine vehicle removal requirement of the Model Year Schedule, or exclude it from the ZEV Milestones calculation. Exemptions to purchase internal combustion engine vehicles would only be needed if the fleet cannot otherwise meet the ZEV targets. A list of vehicles that are not available as ZEVs or near-ZEVs will be kept on the CARB website, and fleet owners can apply for fleet-specific exemptions if the needed vehicle is not listed and if the fleet falls under the High Priority and Federal Fleets or the State and Local Government Fleet requirements.

Zero-emission truck availability (as of July 2022)

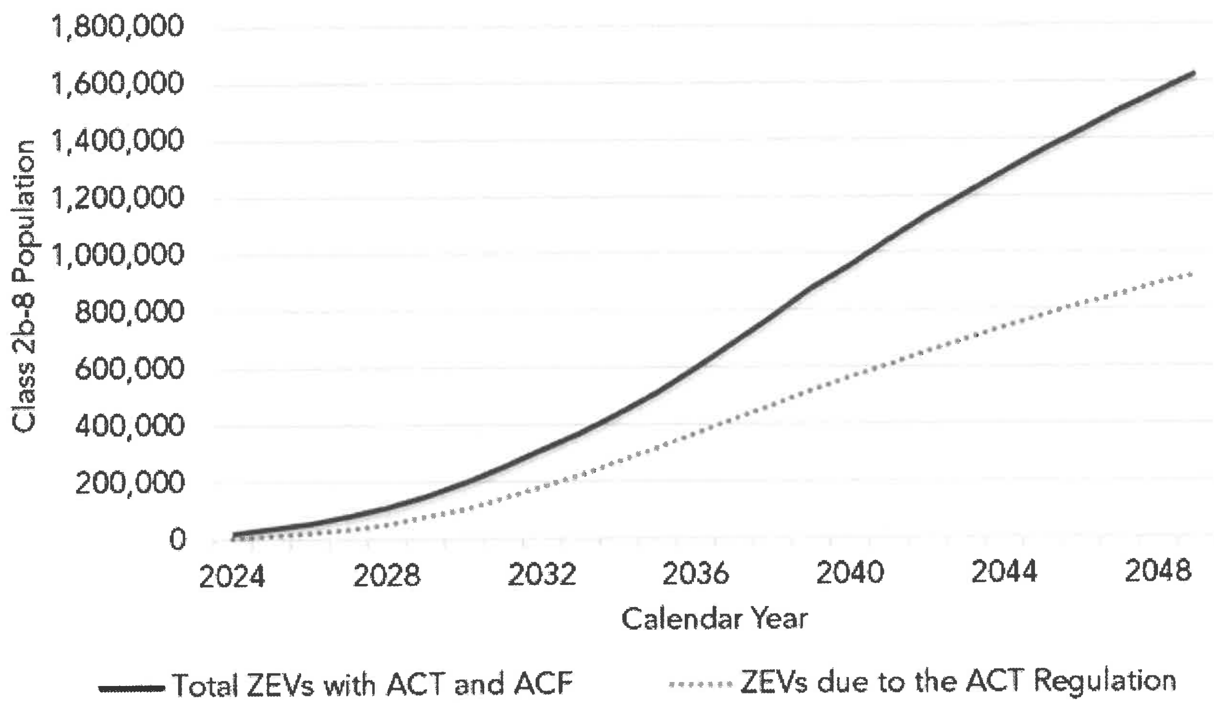
- 148 models in North America are available for order or pre-order.
- 135 models are actively being produced and delivered to customers.
- At least 35 manufacturers are producing vehicle Class 2b through 8 ZEVs.

The ACF regulation will be phased-in over the next two decades, allowing fleets time to replace their existing conventional medium- and heavy-duty vehicles with comparable ZEVs. Fleet managers with vehicles in Milestone Group 3, which includes specialty vehicles, will have the most time to make decisions about the order and timing of vehicle replacements in their fleets. The specialty truck and sleeper cab tractor phase-in requirement starts in 2030, and by this time, ZEV technology is expected to have advanced to the point that range and vehicle weight are no longer barriers. Based on *Large Entity Reporting* data collected in 2021, 3 percent of the medium- and heavy-duty vehicles in California are specialty vehicles, as defined in the ACF regulation.

How many vehicles will be affected by the ACF regulation?

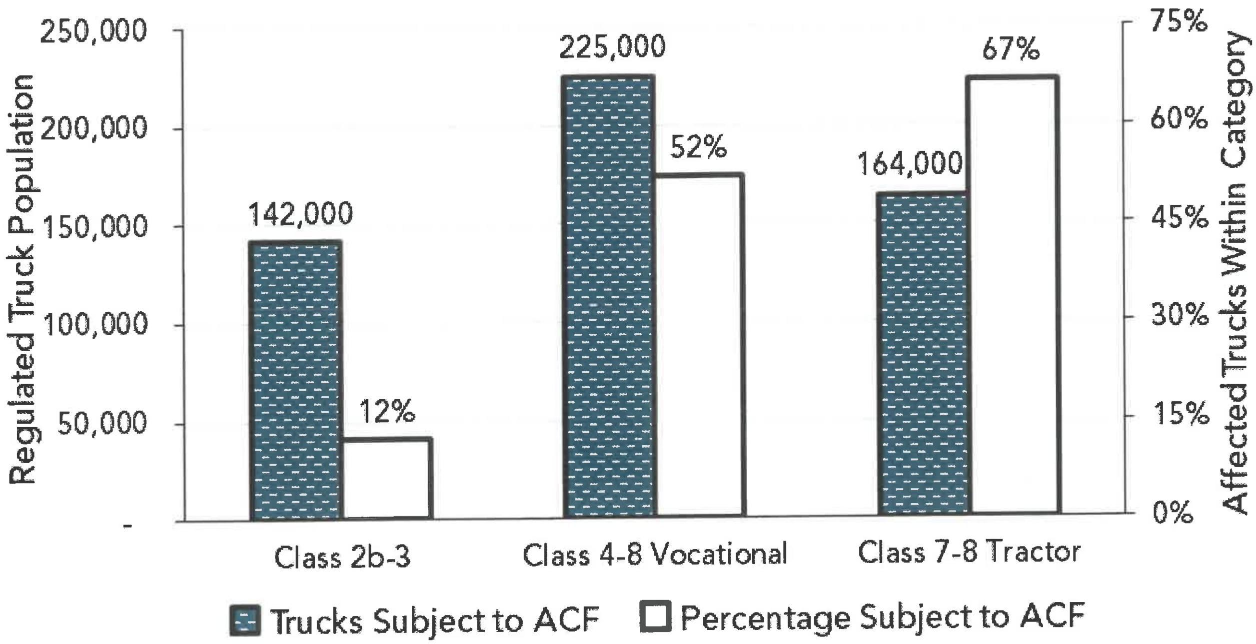
The ACF regulation is expected to significantly increase the number of medium- and heavy-duty ZEVs on California roads, beyond the sales expected from the ACT regulation. The 2 regulations together are expected to result in about 510,000, 1,350,000 and 1,690,000 ZEVs in California in 2035, 2045, and 2050, respectively. Figure 1 below provides details of these increases over time.

Figure 1: Statewide medium- and heavy-duty ZEV population forecast



CARB staff estimate that, of the 1.8 million medium- and heavy-duty vehicles operating daily in California, 532,000 will be subject to ACF fleet requirements. Figure 2, below, shows how many vehicles in certain groups of vehicle classes are estimated to be subject to the ACF regulation, and what percentage of the vehicles that operate in California that is. The regulation focuses on the truck types that pollute the most; 67 percent of all Class 7-8 tractors, the largest polluters, will be covered.

Figure 2: Projected percentage of vehicles affected by regulation



Why do we need the ACF regulation?

The primary goal of the ACF regulation is to accelerate the market for zero-emission trucks, vans, and buses by requiring fleets that are well suited for electrification, to transition to ZEVs where feasible. The Board *directed* CARB staff to ensure that fleets, businesses, and public entities that own or direct the operation of medium- and heavy-duty vehicles in California purchase and operate ZEVs to achieve a smooth transition to ZEV fleets by 2045 everywhere feasible, specifically to reach:

- 100 percent zero-emission drayage trucks, last mile delivery, and government fleets by 2035
- 100 percent zero-emission refuse trucks and local buses by 2040
- 100 percent zero-emission capable utility fleets by 2040

Achieving these and other milestones will also contribute to meeting the goals in the *Governor's Executive Order N-79-20*. The ACF regulation continues the progress toward meeting public health and climate goals by reducing emissions from the medium- and heavy-duty vehicles on California roads, as shown in Table 2 below.

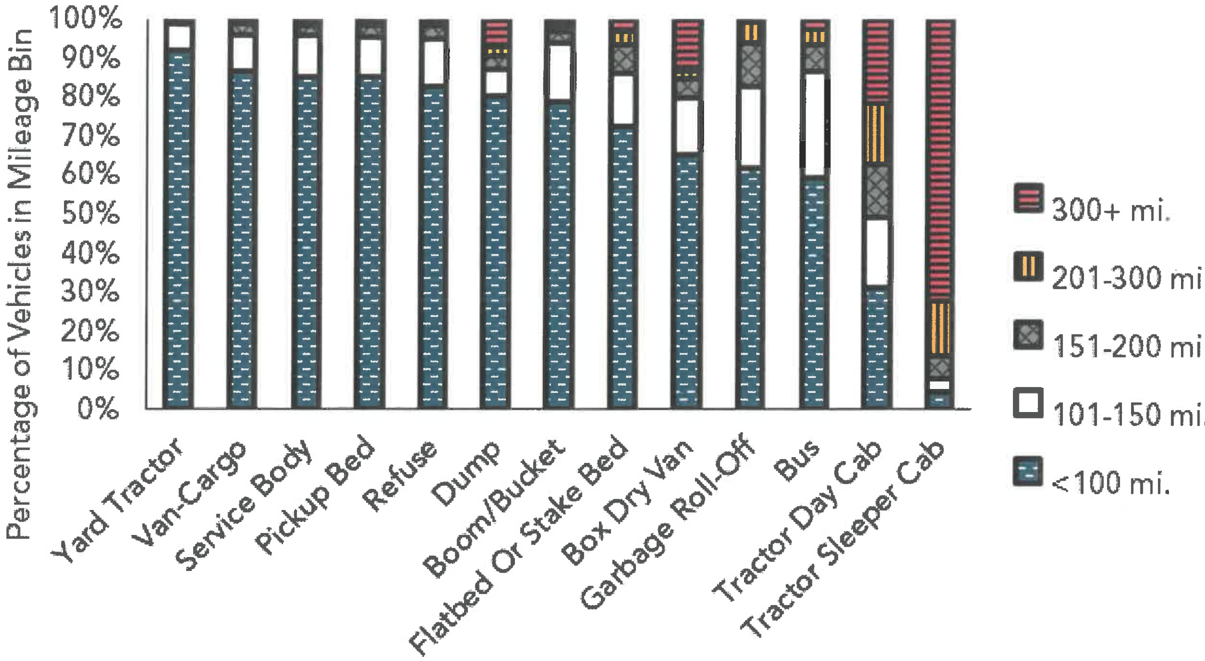
Table 2: ACF's cumulative total emissions reductions from 2024 to 2050 relative to the Legal Baseline

Pollutants	Oxides of Nitrogen (NOx)	Fine Particulate Matter (PM2.5)	Carbon Dioxide (CO_2)
Emissions reductions from ACF	146,872 tons	6,875 tons	327 million metric tons

Are zero-emission trucks available and suitable for today's fleets?

Medium- and heavy-duty ZEVs that are commercially available today are already capable of meeting the daily needs of most local and regional trucking operations and a variety of vocational uses. The ACF regulation also provides flexibility to phase-in ZEVs in the most suitable portions of the fleets, first. Fleet owners reported information about their vehicles and operations as part of the *Large Entity Reporting* data collected in 2021 that shows that the vast majority of trucks drive 100 miles or fewer per day. Figure 3 provides additional detail. Today's medium- and heavy-duty ZEVshave energy storage systems that can meet most of these daily operational requirements.

Figure 3: Estimated average daily mileages for select vehicle categories in Large Entity Reporting



How will disproportionately impacted communities benefit from the ACF regulation?

The regulation will accelerate the deployment of ZEVs and the air quality benefits they offer, to communities most impacted by harmful truck emissions. Neighborhoods located near seaports, intermodal railyards, warehouses, and distribution centers are disproportionately affected by high truck traffic from medium- and heavy-duty trucks. The drayage component of the regulation would require by 2035, that all trucks entering the seaports and intermodal railyards be zero-emission, which will greatly benefit air quality in neighborhoods surrounding these locations. Overall, this regulation will result in nearly half of all semi-trucks that travel on our highways to be zero-emission by 2035 and about 70 percent to be zero-emission by 2042. The regulation will also affect the vehicles that operate directly in neighborhoods such as delivery trucks, garbage trucks, and utility trucks. This will greatly reduce the harmful impacts of tailpipe emissions and disruptive noise in California communities.

Can zero-emission trucks save fleets money?

Yes, zero-emission trucks have lower operating and maintenance costs than conventional trucks which can help offset the higher initial purchase price. Today, the total cost of ownership in California may be comparable to conventional trucks for certain duty cycles and applications (without factoring in State or federal incentives). While ZEVs are expected to cost more up front today, reduced fuel costs, lower maintenance expenses, and Low Carbon Fuel Standard revenues are expected to deliver a net savings of $48 billion to fleets. As components and battery prices fall and technology continues to improve, total cost of ownership is expected to become more favorable.

- Savings of $26.5 billion in statewide health benefits from criteria pollutant emissions
- Net cost savings of $48 billion to fleets

Is there funding for purchasing zero-emission trucks?

The 2021 and 2022 State budgets include a total investment of $10 billion over 6 years to reduce CO_2 emissions from the transportation sector by supporting ZEVs and ZEV infrastructure. This funding will be administered by CARB, the California Energy Commission, the California State Transportation Agency, and the Governor's Office of Economic and Business Development. This new funding builds on ZEV and ZEV infrastructure investments made by the State for more than a decade. These investments will focus on an equitable ZEV transition by continuing to find ways to support disproportionately impacted communities.

Several funding programs are available to support the use of advanced technologies, and because funding programs only pay for early adoption not for compliance, more funding opportunities exist for those fleets that act early. These programs are administered by State agencies, federal agencies, and local air districts. For example, the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP) provides point-of-sale rebates to help offset the purchase price of Class 2b through 8 battery electric and fuel cell electric trucks and buses.

Larger rebates are available for public fleets and small private fleets with vehicles located in disproportionately impacted communities. A list of all vehicles that are currently eligible for funding is available at *California HVIP*.

The Innovative Small e-Fleet Pilot Project is a $35 million set-aside within HVIP to pilot an incentive program geared toward helping small trucking fleets and independent owner operators access zero-emission trucks. This pilot project opened for voucher requests from eligible small fleets in August 2022. More information on this program is available at the *California HVIP small e-fleets* webpage.

The Carl Moyer Memorial Air Quality Standards Attainment Program funds the replacement of old, high-polluting vehicles, engines, and equipment, with new technologies that are cleaner than required, or earlier than what is required by rules and regulations. Grant amounts are based on the cost-effectiveness of harmful pollutants that will be reduced by the project. This program may also fund the installation of charging and fueling infrastructure. More information on this program is available at the *Carl Moyer* webpage.

The Truck Loan Assistance Program helps small-business fleet owners secure financing for upgrading their fleets with newer trucks. Small business truck owners with 100 or fewer employees, $10 million or less in annual revenue averaged over 3 years, and fleets with 10 or fewer heavy-duty vehicles subject to the In-Use Truck and Bus Regulation are eligible to seek financing under this program. More information on this program is available at the *Truck Loan Assistance Program*. This program is being redesigned as the Zero-Emission Truck Loan Pilot to better support the financing of zero-emission trucks along with any needed charging or fueling infrastructure, providing a streamlined lending process for small businesses that are transitioning to ZEVs.

The Fiscal Year 2022-23 Funding Plan for Clean Transportation Incentivesprovides additional funding for zero-emission refusetrucks. Refuse trucks are present in all communities statewide, but their impacts are felt particularly strongly by disproportionately impacted communitiesthat are located near waste transfer stations andare burdened by multiple pollution sources. There are at least 12 battery electric refuse truck models availablefor incentives through HVIP. To learn more about the 2022-2023 Funding Plan, see the *Funding Plan* webpage.

In addition to California's funding programs, the federal *Inflation Reduction Act of 2022* provides complementary and substantial new funding for zero-emission trucks and related infrastructure. The federal *Infrastructure Investment and Jobs Act of*

2021 provides $550 billion in new infrastructure investments, including for roads, bridges, public transit, water infrastructure, resilience, and broadband. For more information about CARB's or federal funding opportunities, visit *CARB Incentive Programs,* the *U.S. Department of Energy's Alternative Fuels Data Center*, the federal Inflation Reduction Act's energy and infrastructure *provisions*, and the Federal Highway Administration *webpage* on implementation of the Infrastructure Investment and Jobs Act.

Technical and financial assistance for infrastructure is also available through several programs. The California Public Utilities Commission has approved $1.054 billion to support medium- and heavy-duty charging installation pursuant to *Senate Bill 350.* In addition to this funding, investor-owned utilities are authorized to make investments in utility-side infrastructure upgrades to support transportation electrification pursuant to *Assembly Bill 841.* The California Energy Commission is also working to accelerate medium- and heavy-duty vehicle infrastructure for both charging and hydrogen refueling, and will invest $2.69 billion from the current State budget in infrastructure that will serve light-, medium-, and heavy-duty infrastructure. The recently launched *EnergIIZE* program provides energy infrastructure incentives for commercial vehicle fleets.

What is being done to increase charging and hydrogen fueling infrastructure for ZEVs?

The ACF regulation specifically focuses on the early transition to zero-emission trucks that typically return to base operations where fleets would install charging and/or hydrogen fueling stations for their own needs. The public sector, with the California Energy Commission in the lead, is planning for and investing in the expansion of charging and hydrogen fueling infrastructure. Their draft *Zero-Emission Vehicle Infrastructure Plan* and their *Electric Vehicle Charging Infrastructure Assessment* provide more information about what the State is doing to help meet fleets' needs with respect to infrastructure. The California Energy Commission's *Integrated Energy Policy Report* is theState's blueprint for energy generation and supply, which is used by investor-owned utilities for their own infrastructure planning needs. In addition to State efforts, the private sector—including vehicle manufacturers—have made announcements regarding investments in installing publicly available charging and/or hydrogen fueling station networks, along both the east and west coasts of the U.S. and in Texas, and between several of California's largest metropolitan areas.

What are the next steps?

The ACF regulation will move medium- and heavy-duty ZEVs into the mainstream by focusing on those fleets that are best able to be on the leading edge, and those of the greatest public health concern. The *2022 State Strategy for the State Implementation Plan* describes efforts beyond ACF and the ACT regulation. This plan also describes the new authorities that would be needed for CARB to accelerate the full transition to zero-emission trucks in a way that minimizes administrative burden for fleet owners and CARB, and that creates market mechanisms to encourage those who have operations that are suitable for electrification to act early while allowing more time for those who can't.

Where can more information be found?

Information about the ACF Regulation and upcoming meetings, workshops, and events is available at the *ACF website*. Information about all medium- and heavy-duty zero-emission regulations, funding, and background can be found at *ZEV TruckStop*.

If you have questions or wish to obtain this document in an alternative format or language, call (916) 323-2927. For TTY/TDD/Speech-to-Speech users, dial 711 for the California Relay Service.

Source URL: *https://ww2.arb.ca.gov/resources/fact-sheets/advanced-clean-fleets-regulation-summary*

Sanitary District No. 5 of Marin County

GASB 75 Disclosures for Fiscal Year Ending June 30, 2023
Based on OPEB Valuation as of June 30, 2022

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(424) 877-2393

The Financial Forecasting Authority

Version 1.0

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Actuarial Certification

Mr. Tony Rubio
Sanitary District No. 5 of Marin County
2001 Paradise Drive
Tiburon, CA 94920

GovInvest has been engaged by Sanitary District No. 5 of Marin County to complete an actuarial valuation of the Sanitary District No. 5 of Marin County OPEB Plan as of June 30, 2022 which will be used as the basis of the financial accounting disclosure for fiscal year ending June 30, 2023 in accordance with GASB Statement No. 75 (Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions).

The purpose of this report is to provide the District with recommended contributions as well as required information needed for financial statement disclosure purposes. The use of this report for any other purpose may not be appropriate. The content of this report may not be modified, reproduced, or provided to third parties, either in whole or in part, without our permission. GovInvest is not responsible for usage, inference, or misinterpretation of this report by third parties.

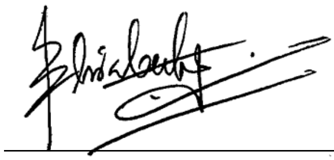
Results presented in this report are based on the census data, substantive plan provisions, and healthcare cost information provided by the District and/or their benefit consultants. All information provided has been reviewed for reasonableness and clarifications or corrections have been requested where appropriate. We have not audited the information at the source, and therefore, do not accept responsibility for the accuracy or completeness of the data on which the information is based. Assumptions made related to missing data have been identified in this report. We are satisfied that the information provided is suitable and sufficient for the purpose of the measurement.

The valuation results were prepared using leased actuarial modeling software that produces results consistent with the purpose of this valuation and meets applicable regulatory requirements. The vendor is responsible for the development, maintenance, and improvement of these models. The models include comprehensive technical documentations that outline how the calculations are performed along with sample life outputs that allow the users to confirm with high degree of accuracy how the programmed benefit is applied to an individual with the proposed decrements and other assumptions. The actuarial team loads the participant data, programs the benefit provisions and proposed assumptions into the model and review sample life outputs and results under the supervision of credentialed actuaries who are proficient users of the software. We are not aware of any material limitations in the model nor any material inconsistencies in the assumptions used within the model.

The discount rate, other economic, and demographic assumptions have been selected by the District with our recommendations and concurrence. We believe each assumption is reasonable based on its own merits and in combination represents reasonable expected experience of the Plan. All calculations have been completed in accordance with generally accepted actuarial principles and practices.

Future actuarial measurements may differ significantly from current measurements due to factors such as actual plan experience that differs from that anticipated by the economic and demographic assumptions as well as changes in future assumptions, substantive plan provisions, and/or applicable law. We have not analyzed the potential range of such differences due to the limited scope of our engagement. To our knowledge, there are no significant events prior to the current year's Measurement Date or as of the date of this report that may materially affect the results presented herein.

The undersigned meets the General Qualification Standards of the American Academy of Actuaries for the purpose of issuing Statement of Actuarial Opinion in the United States. Neither GovInvest nor any of its employees have any relationship with the Plan Sponsor that could impair or appear to impair the objectivity of this report.



Evi Laksana, ASA, MAAA
August 7, 2023

Section 1: Executive Summary

Sanitary District No. 5 of Marin County (the "District") sponsors a single-employer defined benefit OPEB plan that provides medical and prescription drug coverage at retirement. Employees may continue health coverage with the District at retirement for themselves, their spouses, and dependents for life once they meet certain eligibility requirements and as long as required contributions are made.

The results presented in this report are based on the June 30, 2022 valuation with liabilities and assets measured as of June 30, 2022, for use in the District's accrual-based financial statement for the fiscal year ending June 30, 2023. The District has elected to use the GASB 75 "lookback" method where assets and liabilities are measured as of the prior fiscal year-end but applied to the current fiscal year. The June 30, 2022 valuation uses census data of (a) active employees who will be eligible to receive benefits in the future and (b) existing retirees who are currently receiving these benefits as of June 30, 2022, as well as healthcare cost information effective on January 1, 2022 provided by the Plan Sponsor and/or their healthcare consultant.

The actuarial valuation is based on substantive plan provisions outlined in Section 6. The valuation requires assumptions which are listed in Section 7. Results from the June 30, 2022 valuation may be rolled-forward for use in the Plan Sponsor's accrual-based financial statement disclosure for the fiscal year ending June 30, 2024 assuming that there are no material changes to the substantive plan provisions and/or the covered population.

The Plan Sponsor's next full valuation is as of June 30, 2024 with liabilities and assets measured as of June 30, 2024 for reporting in the Plan Sponsor's accrual-based financial statements for the fiscal year ending June 30, 2025.

Changes Since Prior Valuation

The District's Net OPEB Liability has decreased from $496,691 as of June 30, 2021 to $261,102 as of June 30, 2022, which is attributable to a combination of the following factors:

1. Less favorable actual asset performance compared to expected that is offset by higher employer contribution to the Trust, which leads to an increase in the asset balance.
2. Favorable actual demographic experience and lower healthcare cost increase than expected for a liability decrease.
3. Assumption changes as outlined in Section 7 produce a net liability increase.

Summary of Results

Presented below is the summary of results for the current fiscal year compared to the prior fiscal year.

Fiscal Years	2022/23	2021/22
Valuation Date (VD)	June 30, 2022	June 30, 2020
Measurement Date (MD)	June 30, 2022	June 30, 2021
Membership Data as of Valuation Date		
Inactive employees or beneficiaries currently receiving benefits[1]	6	11
Inactive employees entitled to but not yet receiving benefits	0	0
Active employees	10	10
Total membership	16	21
Discount Rate at Measurement Date		
Municipal Bond Index Rate	3.69%	1.92%
Long-term Expected Asset Return	6.00%	7.78%
Year in which Fiduciary Net Position is projected to be depleted	N/A	N/A
Single Equivalent Discount Rate (SEDR)	6.00%	7.78%
Net OPEB Liability as of Measurement Date		
Total OPEB Liability (TOL)	$ 1,462,527	$ 1,510,164
Fiduciary Net Position (FNP)	(1,201,425)	(1,013,473)
Net OPEB Liability (NOL = TOL – FNP)	$ 261,102	$ 496,691
Funded Status (FNP / TOL)	82.1%	67.1%

[1] Prior year inactive employees or beneficiaries currently receiving benefits enrollment includes 6 retirees and surviving spouses and 5 spouses of living retirees. Current year inactive employees or beneficiaries currently receiving benefits enrollment includes 6 retirees and surviving spouses only and exclude spouses of living retirees covered under the plan to comply with GASB requirements on enrollment reporting.

Fiscal Years		2022/23		2021/22
Valuation Date (VD)		June 30, 2022		June 30, 2020
Measurement Date (MD)		June 30, 2022		June 30, 2021
OPEB Expense / (Income) by Fiscal Year	$	(39,827)	$	50,405
Balance of unamortized Deferred Inflows at MD	$	(339,865)	$	(227,274)
Balance of unamortized Deferred Outflows at MD	$	449,679	$	414,640
Actuarially Determined Contribution by Fiscal Year[2]	$	102,433	$	112,895

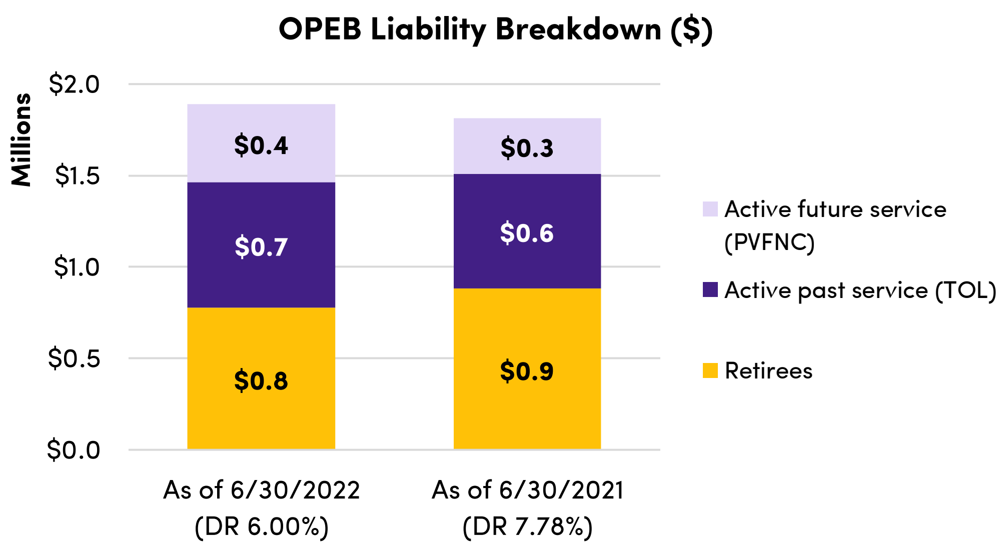
[2] Actuarially Determined Contributions (ADCs) for FY 2021/22 and FY 2022/23 are as shown in the Sanitary District No. 5 GASB 75 OPEB Valuation Report for Disclosures for the Fiscal Year Ending June 30, 2022 prepared by Precision Actuarial, Inc. dated 8/30/2022.

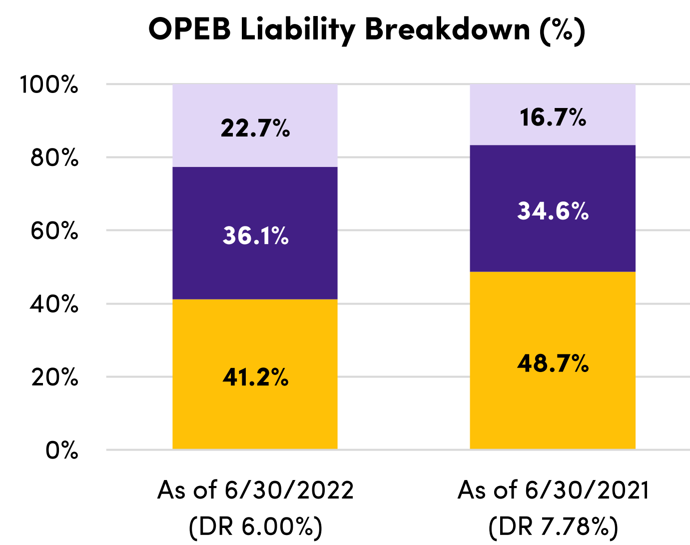
Below is a breakdown of the OPEB liability allocated to past and current service as of the Measurement Date compared to the prior Measurement Date. The liability below includes explicit subsidy (if any) and implicit subsidy. Refer to the Substantive Plan Provisions section for complete information on the District benefit provisions.

Present Value of Future Benefits (PVFB)	As of June 30, 2022	As of June 30, 2021
Active employees	$ 1,112,420	$ 930,408
Retired employees	779,125	883,287
Total PVFB	**$ 1,891,545**	**$ 1,813,695**

Total OPEB Liability (TOL)	As of June 30, 2022	As of June 30, 2021
Active employees	$ 683,402	$ 626,877
Retired employees	779,125	883,287
Total TOL	**$ 1,462,527**	**$ 1,510,164**

	As of June 30, 2022	As of June 30, 2021
Discount Rate	6.00%	7.78%





Section 2: Financial Disclosures

This section provides the necessary accounting disclosures for the District's financial reports as shown in the following tables:

Summary of Membership and Assumptions

The table below shows the number of employees covered by the benefit terms as of June 30, 2022.

Table 1 - Plan Demographics

Inactive employees or beneficiaries currently receiving benefits	6
Inactive employees entitled to but not yet receiving benefits	0
Active employees	10
Total membership	16

The Total OPEB Liability (TOL) as of June 30, 2022 was determined using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified. For a complete list of assumptions, refer to Section 7.

Table 2 - Brief Summary of Assumptions

Inflation	2.30%
Payroll growth	2.80% wage inflation plus seniority, merit, and promotion salary increases based on CalPERS Experience Study and Review of Actuarial Assumptions published in November 2021
Investment rate of return	6.00%
Discount rate	6.00%
Healthcare trend rates	Based on 2022 Getzen model that reflects actual premium increases from 2022 to 2023[3] followed by 6.50% non-Medicare / 5.40% Medicare decreasing gradually to an ultimate rate of 3.73% by 2075

[3] Actual premium increases from 2022 to 2023 used in the valuation are as follows: (a) Non-Medicare: 6.60% Kaiser / 13.50% PERS Platinum and (b) Medicare: -6.40% Kaiser / 10.00% PERS Platinum.

OPEB Expense

The table below shows a comparison of the OPEB Expense recognized by the District for the current and prior fiscal years.

Table 3 – OPEB Expense

Fiscal Years	2022/23		2021/22	
SEDR as of beginning of year		7.78%		7.78%
SEDR as of end of year		6.00%		7.78%
Service Cost	$	36,683	$	35,701
Interest on TOL and Service Cost		116,294		112,439
Changes of benefit terms		(102,846)		0
Projected earnings on OPEB Plan investments		(91,846)		(46,509)
OPEB Plan administrative expenses net of all revenues		278		301
Current period recognition of Deferred Inflows / Outflows of Resources				
Difference between expected and actual experience in the TOL	$	(48,949)	$	(13,373)
Changes of assumptions or other inputs		28,309		(8,180)
Net difference between the projected and actual earnings on OPEB Plan investments		22,250		(29,974)
Other		0		0
Total current period recognition	$	1,610	$	(51,527)
OPEB Expense	$	(39,827)	$	50,405

Schedule of Changes in Net OPEB Liability

Fiscal Year Ending June 30	2023	2022	2021	2020	2019
Measurement Period Ending June 30	2022	2021	2020	2019	2018
Total OPEB Liability (TOL)					
Service Cost	$ 36,683	$ 35,701	$ 37,241	$ 37,269	$ 35,301
Interest on TOL and Service Cost	116,294	112,439	115,941	113,333	116,967
Changes of benefit terms	(102,846)	0	0	0	0
Difference between expected & actual experience	(284,609)	2,258	(103,657)	(226)	0
Changes of assumptions or other inputs	292,960	0	(24,122)	(2,175)	(36,351)
Benefit payments	(106,119)[4]	(99,524)	(114,832)	(84,516)	(82,177)
Net change in TOL	**$ (47,637)**	**$ 50,874**	**$ (89,429)**	**$ 63,685**	**$ 33,740**
TOL – beginning	**$ 1,510,164**	**$ 1,459,290**	**$ 1,548,719**	**$ 1,485,034**	**$ 1,451,294**
TOL – ending	**$ 1,462,527**	**$ 1,510,164**	**$ 1,459,290**	**$ 1,548,719**	**$ 1,485,034**
Plan Fiduciary Net Position (FNP)					
Contributions – employer	$ 446,919	$ 99,524	$ 185,032	$ 152,516	$ 147,877
Contributions – employees	0	0	0	0	0
Benefit payments	(106,119)	(99,524)	(114,832)	(84,516)	(82,177)
Net investment income	(152,570)	218,591	25,195	36,822	38,672
Trust administrative expenses	(278)	(301)	(343)	(436)	(257)
Net change in Plan FNP	**$ 187,952**	**$ 218,290**	**$ 95,052**	**$ 104,386**	**$ 104,115**
FNP – beginning	**$ 1,013,473**	**$ 795,183**	**$ 700,131**	**$ 595,745**	**$ 491,630**
FNP – ending	**$ 1,201,425**	**$ 1,013,473**	**$ 795,183**	**$ 700,131**	**$ 595,745**
Net OPEB Liability – ending	**$ 261,102**	**$ 496,691**	**$ 664,107**	**$ 848,588**	**$ 889,289**
FNP as % of TOL	82.1%	67.1%	54.5%	45.2%	40.1%
Covered payroll – measurement period	$ 1,148,796	$ 962,819	$ 916,620	$ 888,075	$ 849,372
NOL as % of covered payroll	22.7%	51.6%	72.5%	95.6%	104.7%

[4] Based on explicit benefit payment of $77,611 and estimated implicit subsidy payment of $28,508.

Schedule of Changes in Net OPEB Liability (Continued)

Fiscal Year Ending June 30		2018
Measurement Period Ending June 30		**2017**
Total OPEB Liability (TOL)		
Service Cost	$	39,129
Interest on TOL and Service Cost		87,909
Changes of benefit terms		0
Difference between expected & actual experience		0
Changes of assumptions or other inputs		0
Benefit payments		(56,379)
Net change in TOL	**$**	**70,659**
TOL – beginning	**$**	**1,380,635**
TOL – ending	**$**	**1,451,294**
Plan Fiduciary Net Position (FNP)		
Contributions – employer	$	93,476
Contributions – employees		0
Benefit payments		(56,379)
Net investment income		43,423
Trust administrative expenses		(212)
Net change in Plan FNP	**$**	**80,308**
FNP – beginning	**$**	**411,322**
FNP – ending	**$**	**491,630**
Net OPEB Liability – ending	**$**	**959,664**
FNP as % of TOL		33.9%
Covered payroll – measurement period	$	909,928
NOL as % of covered payroll		105.5%

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Schedule of Employer Contribution

Fiscal Year Ending	2023	2022	2021	2020	2019
Actuarially Determined Contribution (ADC)	$ 108,489	$ 102,433	$ 112,895	$ 106,991	$ 108,953
Contributions in relation to the ADC	$ 84,968	$ 446,919	$ 99,524	$ 185,032	$ 152,516
Contribution deficiency / (excess)	$ 23,521	$ (344,486)	$ 13,371	$ (78,041)	$ (43,563)
Covered-employee payroll – employer fiscal year	$ 1,240,682	$ 1,148,796	$ 962,819	$ 916,620	$ 888,075
Contributions as a % of covered-employee payroll	6.8%	38.9%	10.3%	20.2%	17.2%

Fiscal Year Ending	2018
Actuarially Determined Contribution (ADC)	$ 93,476
Contributions in relation to the ADC	$ 147,877
Contribution deficiency / (excess)	$ (54,401)
Covered-employee payroll – employer fiscal year	$ 849,372
Contributions as a % of covered-employee payroll	17.4%

Net OPEB Liability Sensitivity

The following presents the Net OPEB Liability of the District, as well as what the District's Net OPEB Liability would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current discount rate as of June 30, 2022.

Table 4 – Net OPEB Liability Sensitivity (Discount Rate)

	1% Decrease (5.00%)	Discount Rate (6.00%)	1% Increase (7.00%)
Net OPEB Liability / (Asset)	$ 464,143	$ 261,102	$ 92,944

The following presents the Net OPEB Liability of the District, as well as what the District's Net OPEB Liability would be if it were calculated using healthcare cost trend rates that are 1-percentage-point lower or 1-percentage-point higher than the current healthcare cost trend rates as of June 30, 2022.

Table 5 – Net OPEB Liability Sensitivity (Healthcare Trend Rates)

	1% Decrease	Healthcare Trend Rates[5]	1% Increase
Net OPEB Liability / (Asset)	$ 67,622	$ 261,102	$ 502,932

[5] Comparison of Baseline, 1% Decrease and 1% Increase in healthcare trend rates assumptions are as shown below:

Groups	1% Decrease	Baseline	1% Increase
Non-Medicare	5.60% Kaiser / 12.50% PERS Platinum followed by 5.50% decreasing to 2.73% ultimate rate by 2075	6.60% Kaiser / 13.50% PERS Platinum followed by 6.50% decreasing to 3.73% ultimate rate by 2075	7.60% Kaiser / 14.50% PERS Platinum followed by 7.50% decreasing to 4.73% ultimate rate by 2075
Medicare	-7.40% Kaiser / 9.00% PERS Platinum followed by 4.40% decreasing to 2.73% ultimate rate by 2075	-6.40% Kaiser / 10.00% PERS Platinum followed by 5.40% decreasing to 3.73% ultimate rate by 2075	-5.40% Kaiser / 11.00% PERS Platinum followed by 6.40% decreasing to 4.73% ultimate rate by 2075

Deferred Inflows and Deferred Outflows of Resources Related to OPEB

The tables below show changes in the Net OPEB Liability that have not been included in the OPEB expense for the following items:

1. Differences between expected and actual experience of the OPEB plan
2. Changes in assumptions
3. Differences between projected and actual earnings on the OPEB plan investments

The initial amortization base for the first two items above are amortized linearly over the average expected remaining service lives of active and inactive employees. The difference between projected and actual earnings on the OPEB plan investments is amortized linearly over five years.

Table 6 - Historical Deferred Inflows and Outflows

Differences between expected and actual experience

Measurement Period Ending	Fiscal Year Ending	Initial Balance	Initial Amortization Period	Annual Recognition	Recognized in OPEB Expense through June 30, 2022	Unamortized Balance as of June 30, 2022
6/30/2017	6/30/2018	$ 0	N/A	$ 0	$ 0	$ 0
6/30/2018	6/30/2019	$ 0	7.50	$ 0	$ 0	$ 0
6/30/2019	6/30/2020	$ (226)	7.50	$ (31)	$ (124)	$ (102)
6/30/2020	6/30/2021	$ (103,657)	7.60	$ (13,640)	$ (40,920)	$ (62,737)
6/30/2021	6/30/2022	$ 2,258	7.60	$ 298	$ 596	$ 1,662
6/30/2022	6/30/2023	$ (284,609)	8.00	$ (35,576)	$ (35,576)	$ (249,033)

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Changes in assumptions or other inputs

Measurement Period Ending	Fiscal Year Ending	Initial Balance	Initial Amortization Period	Annual Recognition	Recognized in OPEB Expense through June 30, 2022	Unamortized Balance as of June 30, 2022
6/30/2017	6/30/2018	$ 0	N/A	$ 0	$ 0	$ 0
6/30/2018	6/30/2019	$ (36,351)	7.50	$ (4,847)	$ (24,235)	$ (12,116)
6/30/2019	6/30/2020	$ (2,175)	7.50	$ (290)	$ (1,160)	$ (1,015)
6/30/2020[6]	6/30/2021	$ (24,122)	7.60	$ (3,174)	$ (9,260)	$ (14,862)
6/30/2021	6/30/2022	$ 0	7.60	$ 0	$ 0	$ 0
6/30/2022	6/30/2023	$ 292,960	8.00	$ 36,620	$ 36,620	$ 256,340

Differences between projected and actual earnings on OPEB plan investments

Measurement Period Ending	Fiscal Year Ending	Initial Balance	Initial Amortization Period	Annual Recognition	Recognized in OPEB Expense through June 30, 2022	Unamortized Balance as of June 30, 2022
6/30/2017	6/30/2018	$ (16,694)	5.00	$ 0	$ (16,694)	$ 0
6/30/2018	6/30/2019	$ (2,642)	5.00	$ (526)	$ (2,642)	$ 0
6/30/2019	6/30/2020	$ 10,948	5.00	$ 2,190	$ 8,760	$ 2,188
6/30/2020	6/30/2021	$ 30,596	5.00	$ 6,120	$ 18,360	$ 12,236
6/30/2021	6/30/2022	$ (172,082)	5.00	$ (34,417)	$ (68,834)	$ (103,248)
6/30/2022	6/30/2023	$ 244,416	5.00	$ 48,883	$ 48,883	$ 195,533

[6] This amortization base has been updated from $23,125 to $24,122 to be consistent with the changes in assumptions or other inputs actuarial liability reduction reported in the 2019/20 measurement period. The annual amortization amount has been revised from $3,043 to $3,174. The amount recognized in OPEB expense through June 30, 2022 is based on the $3,043 annual amortization for the first two years followed by $3,174 for the current year. The difference in the amount recognized in the first two years ($262) has been added to the final year of amortization.

The table below shows the unamortized balance of Deferred Inflows and Outflows of Resources as of June 30, 2022 for financial statement disclosure for the fiscal year ending June 30, 2023.

Table 7 – Unamortized Balance of Deferred Inflows and Outflows

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 1,662	$ (311,872)
Changes in assumptions or other inputs	256,340	(27,993)
Net difference between projected and actual earnings on OPEB plan investments	106,709	0
Employer contribution subsequent to the Measurement Date	84,968[7]	0
Total	**$ 449,679**	**$ (339,865)**

Schedule of future annual amortizations of Deferred Inflows and Outflows that will be recognized in future OPEB expense is as shown below.

Table 8 – Schedule of Future Deferred Inflows and Outflows Amortization

Measurement Period Ending	Amounts
2023	$ 2,134
2024	$ (58)
2025	$ (3,746)
2026	$ 33,258
2027	$ (9,001)
Thereafter	$ 2,259

[7] Based on actual retiree healthcare expenses of $84,968 (including implicit subsidy credit) plus no additional District contribution to the Trust.

Section 3: Asset Information

Funding Policy

The District has an OPEB Trust that is invested in the California Employers' Retiree Benefit Trust (CERBT) Strategy 1, which is a qualified irrevocable trust. The District has historically contributed the Actuarially Determined Contribution through a combination of retiree healthcare expenses payment made from outside of the Trust and additional contribution to the Trust.

Asset Breakdown[8]

As of	June 30, 2022		June 30, 2021	
Assets				
Cash and cash equivalents	$	0	$	0
Investments				
Equity	$	588,698	$	597,949
Fixed Income		276,328		253,368
Treasury Inflation-Protected Securities (TIPS)		60,071		50,674
Real Estate Investment Trusts (REITs)		240,285		81,078
Commodities		36,043		30,404
Total investments	$	1,201,425	$	1,013,473
Total assets	$	1,201,425	$	1,013,473
Liabilities				
Accounts payable	$	0	$	0
Total liabilities	$	0	$	0
Net asset available for benefits	$	1,201,425	$	1,013,473

[8] Asset breakdown by investment class as of June 30, 2021 and June 30, 2022 are based on the target allocation for CERBT Strategy 1. The target allocation used to allocate June 30, 2022 asset is based on the new proposed portfolios approved by the CalPERS Board of Administration in the Spring of 2022.

Reconciliation of Assets

Measurement Periods	2021/22	2020/21
Additions		
Contributions received		
Employer[9]	$ 446,919	$ 99,524
Employees	0	0
Total contributions	$ 446,919	$ 99,524
Investment income		
Interest and dividend	$ 0	$ 0
Net increase/(decrease) in fair value of investments	(152,570)	218,591
Accrued income	0	0
Investment expense	0	0
Net investment income	$ (152,570)	$ 218,591
Total additions	$ 294,349	$ 318,115
Deductions		
Benefit payments net of retiree contributions	$ (106,119)	$ (99,524)
Administrative expenses	(278)	(301)
Total deductions	$ (106,397)	$ (99,825)
Change in net position	$ 187,952	$ 218,290
Net position – beginning of year	$ 1,013,473	$ 795,183
Net position – end of year	$ 1,201,425	$ 1,013,473

[9] Includes $24,086 and $28,508 in implicit subsidy credit for FY 2020/21 and FY 2021/22 respectively.

Section 4: Actuarially Determined Contribution

Actuarially Determined Contribution (ADC) is the recommended contribution that, if paid on an ongoing basis, is expected to provide sufficient resources to fund (a) future normal cost (cost for new service) and (b) the amortized unfunded liabilities (cost for past service). There is no requirement to fund OPEB benefit under GASB 75 and it is up to the Plan Sponsor's discretion to determine the OPEB contributions based on their fiscal situation.

Fiscal Years	2023/24	2024/25
Funding discount rate	6.00%	6.00%
Amortization method	Level % of Pay	Level % of Pay
Payroll growth	2.80%	2.80%
Amortization period	14 years	13 years
Actuarial Accrued Liability (AAL) – beginning of year[10]	$ 1,526,481	$ 1,594,639
Actuarial Value of Assets (AVA) – beginning of year[11]	(1,272,892)	(1,351,915)
Unfunded AAL (UAAL) – beginning of year	$ 253,589	$ 242,724
Normal Cost – beginning of year	$ 36,856	$ 38,231
Amortization of UAAL – beginning of year	21,939	22,294
Total Normal Cost and amortization of UAAL	$ 58,795	$ 60,525
Interest adjustment for end of year payment	3,528	3,632
Administrative expense	636	676
Actuarially Determined Contribution (ADC)	$ 62,959	$ 64,833
Expected benefit payments	$ 59,750	$ 64,292

[10] Fiscal years 2023/24 and 2024/25 AAL as of beginning of year is based on June 30, 2022 OPEB valuation results projected to June 30, 2023 and 2024 on a "no gain/loss" basis.

[11] Fiscal years 2023/24 and 2024/25 AVA as of beginning of year is projected from June 30, 2022 market value of asset assuming 6.00% investment income, District contribution equals to the actual retiree healthcare expenses in FY 2022/23 ($84,968) and the Actuarially Determined Contributions in FY 2023/24 ($62,959), and 0.05% administrative expense applied to beginning of year asset balance.

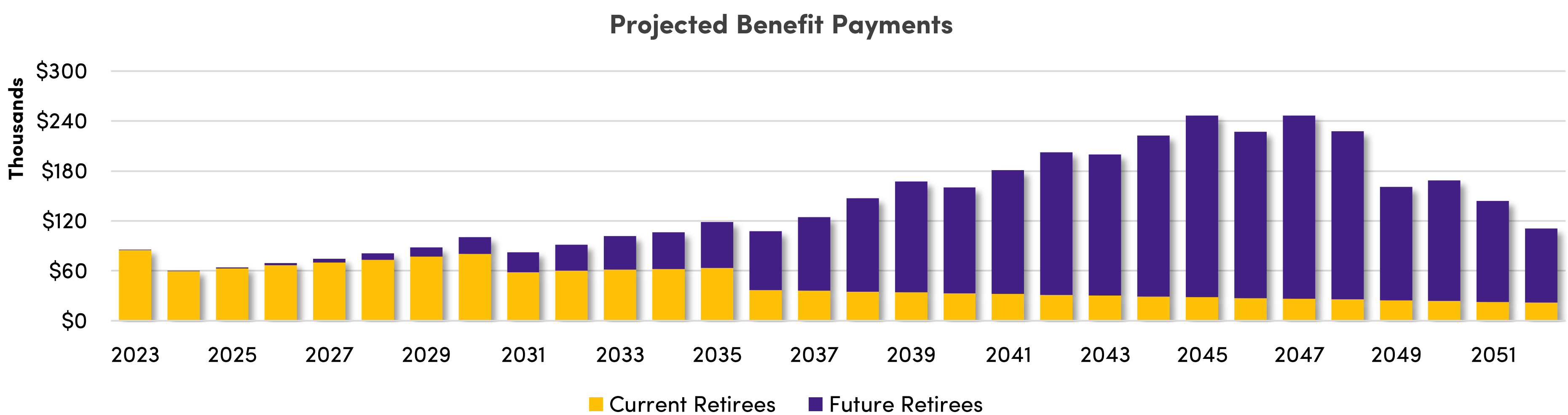
Section 5: Projected Benefit Payments

The below table shows the projected benefit payments for the next 30 years for a closed group of participants (both active employees and existing retirees) who are included in the census data as of June 30, 2022. This exhibit is provided for informational purposes only and is not a required disclosure under GASB 75. Projected benefit payments below include both explicit (if any) and implicit subsidies (as applicable).

FYE	Future Retirees	Current Retirees	Total[12]
2023	$ 268	$ 84,700	$ 84,968
2024	$ 476	$ 59,274	$ 59,750
2025	$ 1,439	$ 62,853	$ 64,292
2026	$ 2,676	$ 66,423	$ 69,099
2027	$ 4,402	$ 69,956	$ 74,358
2028	$ 7,188	$ 73,488	$ 80,676
2029	$ 11,125	$ 77,006	$ 88,131
2030	$ 19,984	$ 80,564	$ 100,548
2031	$ 23,561	$ 58,449	$ 82,010
2032	$ 31,239	$ 59,921	$ 91,160

FYE	Future Retirees	Current Retirees	Total
2033	$ 40,127	$ 61,358	$ 101,485
2034	$ 44,133	$ 62,343	$ 106,476
2035	$ 55,116	$ 63,302	$ 118,418
2036	$ 70,702	$ 36,982	$ 107,684
2037	$ 88,446	$ 36,082	$ 124,528
2038	$ 111,992	$ 35,112	$ 147,104
2039	$ 133,225	$ 34,115	$ 167,340
2040	$ 127,087	$ 33,100	$ 160,187
2041	$ 148,593	$ 32,096	$ 180,689
2042	$ 171,501	$ 31,111	$ 202,612

FYE	Future Retirees	Current Retirees	Total
2043	$ 169,609	$ 30,146	$ 199,755
2044	$ 193,291	$ 29,204	$ 222,495
2045	$ 218,212	$ 28,285	$ 246,497
2046	$ 199,505	$ 27,382	$ 226,887
2047	$ 220,104	$ 26,490	$ 246,594
2048	$ 201,870	$ 25,587	$ 227,457
2049	$ 135,895	$ 24,659	$ 160,554
2050	$ 144,833	$ 23,688	$ 168,521
2051	$ 121,019	$ 22,671	$ 143,690
2052	$ 89,124	$ 21,623	$ 110,747



[12] Total benefit payment for FYE 6/30/2023 is based on explicit benefit payment of $78,541 and estimated implicit subsidy payment of $6,427. The benefit payment split between future and existing retirees has been estimated by our valuation software.

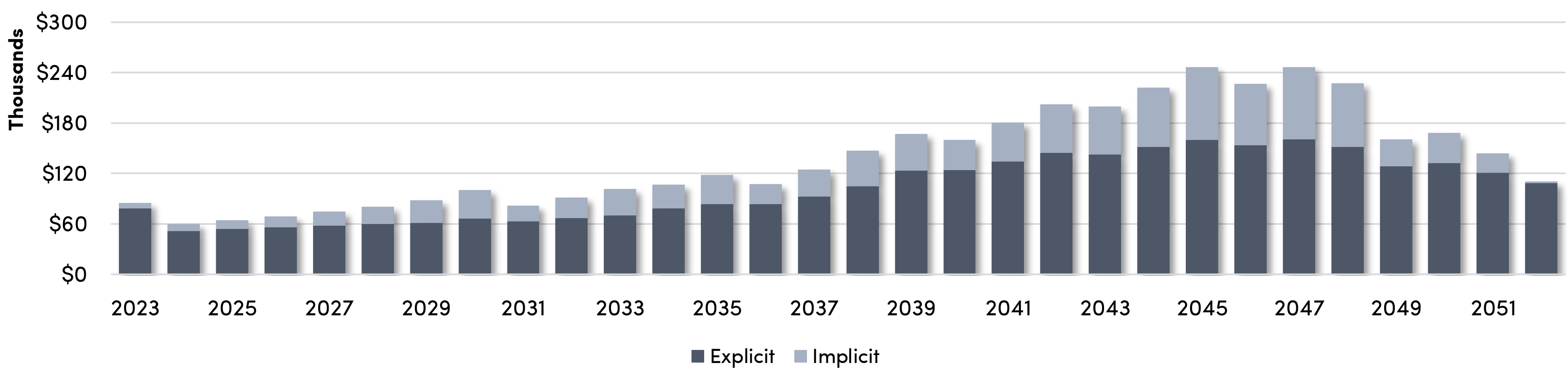
The following table splits the projected benefit payments for the next 30 years between the explicit and implicit subsidies for a closed group of participants (both active employees and existing retirees) who are included in the census data as of June 30, 2022.

FYE	Explicit[13]	Implicit	Total
2023	$ 78,541	$ 6,427	$ 84,968
2024	$ 51,534	$ 8,216	$ 59,750
2025	$ 53,935	$ 10,357	$ 64,292
2026	$ 56,028	$ 13,071	$ 69,099
2027	$ 57,951	$ 16,407	$ 74,358
2028	$ 59,741	$ 20,935	$ 80,676
2029	$ 61,343	$ 26,788	$ 88,131
2030	$ 66,152	$ 34,396	$ 100,548
2031	$ 63,277	$ 18,733	$ 82,010
2032	$ 66,658	$ 24,502	$ 91,160

FYE	Explicit	Implicit	Total
2033	$ 70,446	$ 31,039	$ 101,485
2034	$ 78,651	$ 27,825	$ 106,476
2035	$ 83,788	$ 34,630	$ 118,418
2036	$ 83,527	$ 24,157	$ 107,684
2037	$ 92,328	$ 32,200	$ 124,528
2038	$ 105,091	$ 42,013	$ 147,104
2039	$ 123,242	$ 44,098	$ 167,340
2040	$ 123,781	$ 36,406	$ 160,187
2041	$ 134,424	$ 46,265	$ 180,689
2042	$ 144,694	$ 57,918	$ 202,612

FYE	Explicit	Implicit	Total
2043	$ 142,379	$ 57,376	$ 199,755
2044	$ 151,352	$ 71,143	$ 222,495
2045	$ 159,879	$ 86,618	$ 246,497
2046	$ 153,701	$ 73,186	$ 226,887
2047	$ 160,635	$ 85,959	$ 246,594
2048	$ 151,907	$ 75,550	$ 227,457
2049	$ 128,467	$ 32,087	$ 160,554
2050	$ 132,309	$ 36,212	$ 168,521
2051	$ 120,674	$ 23,016	$ 143,690
2052	$ 108,798	$ 1,949	$ 110,747

Projected Benefit Payments (Explicit/Implicit)



[13] Explicit benefit payment for FYE 6/30/2023 is based on the actual retiree healthcare expenses paid by the District.

Section 6: Substantive Plan Provisions

Changes Since Prior Valuation

In the prior valuation, the District contributes 100% of premium up to the weighted average of single member plan premiums, plus 90% of the weighted average of the additional premium for the four most commonly selected plans that cover dependents, less the PEMHCA minimum benefit for active employees hired between 9/1/2000 and 7/1/2017 who retire at age 55 with five years of continuous, full-time service leading up to retirement. This benefit is now applicable only to active employees hired between 9/1/2000 and 12/18/2012. All employees hired after 12/18/2012 are eligible for the PEMHCA minimum benefit only at retirement. This change caused a decrease in the liability.

Eligibility

Employees are eligible for lifetime retiree health benefits once they retire within 120 days from date of separation and the retiree must be receiving benefits from California Public Employees Retirement System (CalPERS). The earliest service retirement eligibility requirements under CalPERS are as follows:

Membership Date	Requirements
Before 1/1/2013	Age 50 with 5 years of CalPERS service[14]
On/after 1/1/2013	Age 52 with 5 years of CalPERS service[14]

CalPERS eligibility requirements for disability benefits are as follows:

- Ordinary Disability: five years of service
- Line of Duty Disability: no age or service requirement

Spouse Benefits

Employees are allowed to elect spousal coverage at retirement. Retiree medical coverage continues to surviving spouses upon death of retirees (including Employer Subsidy) as long as the required contributions are made and the retiree elects for the spouse to continue receiving retirement benefit. There is no surviving spouse coverage upon the death of active employees.

Ancillary Benefits

There is no District-subsidized dental, vision, life insurance, or Medicare Part B reimbursement benefit at retirement.

[14] Note that service includes service across all CalPERS employers and with other retirement systems with which CalPERS has reciprocity agreements.

Employer Subsidy

The District contributes the following amounts to the retiree's HRA for employees hired up to 12/18/2012. The District pays the PEMHCA minimum benefit for all employees and retirees.

Hire Date Cut-Off	District Subsidy
Prior to 9/1/2000	For retirees who retire at age 55 with five years of continuous, full-time service leading up to retirement, the District contributes 100% of premium up to the maximum Kaiser Basic / Supplemental rate for retiree and eligible dependents coverage, less the PEMHCA minimum benefit
Between 9/1/2000 and 12/18/2012	For retirees who retire at age 55 with five years of continuous, full-time service leading up to retirement, the District contributes 100% of premium up to the weighted average of single member plan premiums, plus 90% of the weighted average of the additional premium for the four most commonly selected plans that cover dependents, less the PEMHCA minimum benefit*

* For valuation purposes, we are assuming that the District subsidy for employees hired between 9/1/2000 and 12/18/2012 is based on 20% of Kaiser Permanente and 80% of PERS Platinum costs. The corresponding premium rates based on this assumed health plan election at retirement effective on January 1, 2022 and 2023 are as shown below.

	Eff. January 1, 2022			Eff. January 1, 2023		
	Single	2-Party	Family	Single	2-Party	Family
Non-Medicare	$1,017.02	$2,034.04	$2,644.25	$1,142.84	$2,285.69	$2,971.38
Medicare	$366.06	$732.12	$1,098.18	$392.67	$785.33	$1,178.01

The final monthly District subsidy amounts used in the valuation as of January 1, 2022 and 2023 are as shown below.

	Eff. January 1, 2022			Eff. January 1, 2023		
	Single	2-Party	Family	Single	2-Party	Family
Non-Medicare	$1,017.02	$1,932.34	$2,481.53	$1,142.84	$2,171.40	$2,788.54
Medicare	$366.06	$695.51	$1,024.96	$392.67	$746.07	$1,099.46

PEMHCA Minimum Pursuant to Government Code 22892 of the Public Employees' Medical and Hospital Care Act (PEMHCA), the District's contribution is not less than the minimum amount allowed, which are $149 and $151 per month for 2022 and 2023. The PEMHCA minimum contribution increases annually by the CPI medical care component. The amount of District-provided minimum contribution is the same regardless of the retiree's dependent coverage and health plan choice.

Retiree Contributions Retirees are required to contribute the portion of premium rates not covered by the Employer Subsidy.

Premium Rates The monthly CalPERS premium rates used in the valuation effective on January 1, 2022 and 2023 are as shown below.

		As of January 1, 2022			As of January 1, 2023		
Regions	Non-Medicare Plans	Single	2-Party	Family	Single	2-Party	Family
Region 1	Kaiser Permanente	$ 857.06	$ 1,714.12	$ 2,228.36	$ 913.74	$ 1,827.48	$ 2,375.72

	As of January 1, 2022			As of January 1, 2023		
Medicare Plans	Single	2-Party	Family	Single	2-Party	Family
Kaiser Senior Advantage	$ 302.53	$ 605.06	$ 907.59	$ 283.25	$ 566.50	$ 849.75
PERS Platinum Medicare Supplement	$ 381.94	$ 763.88	$ 1,145.82	$ 420.02	$ 840.04	$ 1,260.06

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Section 7: Actuarial Methods and Assumptions

Changes Since Prior Valuation

The following assumptions have been updated since the prior valuation:

1. The Single Equivalent Discount Rate (SEDR) has been reduced from 7.78% as of June 30, 2021 to 6.00% as of June 30, 2022 based on updated expected long-term rate of return of the Trust, which caused an increase in the liability.
2. Payroll growth, mortality, termination, disability, and retirement rates assumptions have been updated from CalPERS Experience Study and Review of Actuarial Assumptions published in December 2017 to the most recent study published in November 2021. The net impact of these changes is a slight decrease in the liability.
3. In the prior valuation, active employees are assumed to elect Kaiser health plan at retirement. In this year's valuation, the active employees health plan election at retirement has been updated to the following based on existing retirees health plan election. This change caused an increase in the District's liability.

	Kaiser Permanente / Kaiser Senior Advantage	PERS Platinum / PERS Platinum Medicare Supplement
Pre-Medicare	100%	
Post-Medicare	20%	80%

4. Health care trend rates have been updated as follows, which are based on updated Getzen Model of Long-Run Medical Cost Trend Model, publicly available health care trend rates surveys, and medical inflation data. This change caused a decrease in the liability.
   a. Medical/prescription drug: from Getzen 2021 to Getzen 2022 version that reflects actual premium increases from 2022 to 2023[15] followed by 6.50% non-Medicare / 5.40% Medicare decreasing gradually to an ultimate rate of 3.73% by 2075.
   b. PEMHCA: from 3.00% for all years to 1.30% from 2022 to 2023 followed by 3.50% for all subsequent years.

[15] Actual premium increases from 2022 to 2023 used in the valuation are as follows: (a) Non-Medicare: 6.60% Kaiser / 13.50% PERS Platinum and (b) Medicare: -6.40% Kaiser / 10.00% PERS Platinum.

5. Percentage of active employees electing health coverage at retirement has been reduced from 90% to 50% for those hired after 12/18/2012. This change caused a slight decrease in the liability.
6. Percentage of active employees assumed to elect spousal coverage has been updated from 70% to 85% based on actual spousal coverage election rate of existing retirees, which caused an increase in the liability.

Valuation Date	June 30, 2022
Measurement Date	June 30, 2022
Reporting Period	Fiscal year ending June 30, 2023
Discount Rate	For accounting disclosure: 6.00% as of June 30, 2022 and 7.78% as of June 30, 2021 For funding purposes (in calculating the Actuarially Determined Contribution): 6.00% for FY 2023/24 and 2024/25 contributions Refer to the Discussion of Discount Rate section for additional information on the discount rate setting.
Actuarial Cost Method	Entry Age Normal Level Percentage of Pay; a method that allocates the actuarial present value of the projected benefits of each individual on a level basis over the earnings of the individual between entry age and assumed exit age(s). • The portion allocated to a valuation year is called the Normal Cost. • The portion allocated to past periods is called the Actuarial Accrued Liability (AAL) or Total OPEB Liability (TOL).
Payroll Growth	2.80% wage inflation plus seniority, merit, and promotion salary increases based on CalPERS Experience Study and Review of Actuarial Assumptions published in November 2021 for Public Agency Miscellaneous members. Refer to the Appendix for sample rates.
Census Data	Census information was provided by the District as of June 30, 2022. We have reviewed this data for reasonableness and no material modification was made to the data.
Mortality	Based on CalPERS Experience Study and Review of Actuarial Assumptions published in November 2021 for Public Agency Miscellaneous members. Refer to the Appendix for sample rates.

Termination	Based on CalPERS Experience Study and Review of Actuarial Assumptions published in November 2021 for Public Agency Miscellaneous members. Refer to the Appendix for sample rates.
Disability	Based on CalPERS Experience Study and Review of Actuarial Assumptions published in November 2021 for Public Agency Miscellaneous members. Refer to the Appendix for sample rates.
Retirement	Based on CalPERS Experience Study and Review of Actuarial Assumptions published in November 2021 for Public Agency Miscellaneous members. Refer to the Appendix for sample rates.
Participation Rate	90% of active employees hired on/prior to 12/18/2012 and 50% of active employees hired after 12/18/2012 are assumed to elect health coverage with the District at retirement. Existing retirees who are currently enrolled in the District's health plans are assumed to continue coverage until death. Upon retiree's death, surviving spouses are assumed to continue coverage in the City's health plans (all of them are assumed to receive contingent pension benefit).
Health Plan Election	Employees are assumed to elect Kaiser Permanente health plan at retirement prior to Medicare eligibility. Upon Medicare eligibility, 20% of active employees are assumed to elect Kaiser Permanente Senior Advantage with the remaining 80% electing PERS Platinum Medicare Supplement. Existing retirees are assumed to remain in the same health plan option they are currently enrolled in for life, except for those who are under the age of 65 as of the Valuation Date. These retirees are assumed to enroll in the corresponding Medicare health plan option upon Medicare eligibility.
Spousal Election	For future retirees, 85% of active employees are assumed to elect spousal coverage at retirement. Husbands are assumed to be three years older than wives. For existing retirees, spousal coverage and age is based on actual data.
Dependent Election	None.
Medicare Eligibility	All future and existing retirees (including disabled retirees) are assumed to be eligible for Medicare at age 65.

Per Capita Costs

The valuation projects health care costs for employees who remain enrolled in the District's benefit plans after retirement. In accordance with Actuarial Standards of Practice No. 6 (ASOP 6), the actuarial development of health care costs should preferably use the health plan experience that is considered the best predictor of future claims experience assuming it is sufficiently credible. In the absence of credible health plan experience data, the actuary may use other methods such as premiums and normative databases to develop the per capita costs.

As medical/prescription drug costs generally vary by age, age-specific costs should be used in the development of initial per capita costs and projection of future benefit costs, except in very limited circumstances defined in ASOP 6 Section 3.7.7(c). The development of the age-specific costs should be based on the demographics of the group being valued and the group's total expected claims or premiums.

Retiree healthcare costs are, on average, significantly higher than active employees and if the District charges blended premium rates (determined using active employees and retiree claims experience) to the retirees, the District is providing an implicit subsidy for these retirees. Under GASB 75, the implicit subsidy must be included in the post-employment medical benefit obligation. Separate costs should be developed for Medicare-eligible participants due to Medicare being the primary payer for these retirees, which leads to a reduction to the Plan Sponsor's health plan costs.

In developing the per capita costs, we have used CalPERS health plan premium rates effective on January 1, 2022 and aging factors and subscriber enrollments for HMO and PPO plans combined as published in the CalPERS Health Plan (PEMHCA) Implicit Subsidy Data for Calendar 2019.

The following table shows the sample per capita costs at select ages for calendar year 2022 used in the valuation. These costs are assumed to increase with health care trend rates.

	Kaiser	
Age	Male	Female
45	$3,283	$3,554
50	$3,219	$3,696
55	$3,157	$3,843
60	$3,096	$3,997
64	$3,035	$4,156

Per Capita Costs (Cont'd) We have assumed that CalPERS health premiums for Medicare eligible retirees are based on Medicare eligible retiree claims experience and represent the expected true cost of retiree coverage. As such, we have assumed there is no implicit subsidy for Medicare retirees. The annual costs used on/after age 65 are $3,630 for Kaiser Permanente Senior Advantage and $4,583 for PERS Platinum Medicare Supplement plans. These costs are assumed to increase with health care trend rates.

Trend Rates Historically, health care costs have increased more rapidly than the rate of inflation. In estimating the value of retiree health benefits, assumptions must be made on future increases in healthcare costs. The health care trend rates assumption used in this valuation is based on the Getzen Model of Long-Run Medical Cost Trends, which was first designed by T.E. Getzen for the Society of Actuaries (SOA) in 2007. The model is designed to make long-run forecasts and typically used to select medical trend assumptions for retiree medical valuations to present liabilities disclosed under the appropriate accounting standards, or to determine contributions under a funding policy. The long-run baseline projection and input variables were developed under the guidance of the SOA Project Oversight Group. The model is updated annually along with updated documentation and recommended input variables by the author of the model.

The baseline assumptions used in the Getzen model are as shown in the table below.

Inflation Rate	2.3%
Real GDP Per Capita Growth	1.4%
Excess Medical Cost Growth	1.0%
Health Share of GDP Resistance Point	25.0%
Year for Limiting Cost Growth to GDP Growth	2075

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Trend Rates (Cont'd)

The output of the Getzen Model of Long-Run Medical Cost Trend Model used in the valuation is as shown below.

Year	Non-Medicare	Medicare
2022	Actual[16]	Actual[17]
2023	6.50%	5.40%
2024	6.00%	5.30%
2025	5.50%	5.20%
2030	4.84%	4.84%
2035	4.77%	4.77%

Year	Non-Medicare	Medicare
2040	4.60%	4.60%
2050	4.43%	4.43%
2060	4.33%	4.33%
2070	4.00%	4.00%
2075+	3.73%	3.73%

PEMHCA minimum cost is assumed to increase by 1.30% from 2022 to 2023 followed by 3.50% annually for all subsequent years.

[16] The actual premium increases from 2022 to 2023 used in the valuation are 6.60% for Kaiser and 13.50% for PERS Platinum.
[17] The actual premium increase from 2022 to 2023 used in the valuation are -6.40% for Kaiser and 10.00% for PERS Platinum.

Discussion of Discount Rates

Under GASB 75, the discount rate used in valuing OPEB liabilities as of the Measurement Date is a single rate that reflects:

1. The long-term expected rate of return on OPEB plan investments that are expected to be used to finance future benefit payments, to the extent that (a) they are sufficient to pay for the projected benefit payments and (b) the OPEB plan assets are expected to be invested using a strategy that will achieve that return.
2. A yield or index rate for 20-year tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale), when the conditions in (1) above are not met.

For the current year's valuation:

1. The expected long-term real rate of return of the OPEB Trust is 6.00% as of June 30, 2022. This rate of return was determined using a building-block method in which best-estimate ranges of expected future real rates of return net of investment expense are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future rates of return by the target allocation percentage. The Plan Sponsor's expected future real rates of return by asset class is as shown below.[18]

Asset Classes	Target Allocation	Projected Real Rates of Return
Global Equity	49%	4.50%
Fixed Income	23%	1.40%
Global Real Estate (REITs)	20%	3.70%
Treasury Inflation-Protected Securities (TIPS)	5%	0.50%
Commodities	3%	1.10%
Total	100%	

2. The municipal bond index as of the prior and current Measurement Dates are as shown below:

Index	June 30, 2022	June 30, 2021
Fidelity General Obligation AA 20-Year Bond	3.69%	1.92%

3. The final equivalent single discount rate used for accounting disclosure is 6.00% with the expectation that the Plan Sponsor will contribute in accordance with the Funding Policy described in Section 3. Under this Funding Policy, the OPEB Trust is not expected to be depleted in the future.

The discount rate used to calculate the Actuarially Determined Contribution for recommended funding contribution is 6.00%.

[18] The assumed inflation rate of 2.30% is added to the weighted expected future real rate of return to obtain the assumed discount rate. Projected long-term real rates of return are compound returns (time-weighted and net of all fees), adjusted for inflation, as shown in the CERBT Investment Policy Information – 2022 Capital Market Assumptions adopted by the CalPERS Board of Administration in November 2021.

Section 8: Participant Summary

Active Employees

Actives with Health Coverage	Single	2-Party	Family	Total	Avg. Age	Avg. Svc	Total Salary
Kaiser Permanente	5	1	3	9	44.9	8.7	$ 980,963
Total actives with health coverage	**5**	**1**	**3**	**9**	**44.9**	**8.7**	**$ 980,963**

Actives without Health Coverage	Total	Avg. Age	Avg. Svc	Total Salary
Total actives without health coverage	**1**	**39.1**	**10.0**	**$ 259,719**

Active employees who currently have no coverage are assumed to elect health coverage with the District at retirement according to the Participation Rate and Health Plan Election assumptions shown on page 26.

Active Age-Service Distribution

	Years of Service with the District										
Age	<1	1 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40+	Total
<25											0
25 – 29	1										1
30 – 34											0
35 – 39		1	1								2
40 – 44		1		1	1						3
45 – 49			1			1					2
50 – 54											0
55 – 59	1		1								2
60 – 64											0
65+											0
Total	**2**	**2**	**3**	**1**	**1**	**1**	**0**	**0**	**0**	**0**	**10**

Retired Employees

Retirees with Health Coverage	Single	2-Party	Family	Total	Avg. Age
Kaiser Permanente		2		2	67.7
PERS Platinum Medicare Supplement		4		4	74.7
Total retirees with health coverage	**0**	**6**	**0**	**6**	**72.4**

Age	Retirees
<50	
50 – 54	
55 – 59	1
60 – 64	
65 – 69	1
70 – 74	
75 – 79	4
80 – 84	
85 – 89	
90+	
Total	**6**

Enrollments above include retirees enrolled in the corresponding Medicare plans or those with split enrollment in pre-Medicare and Medicare plans.

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Comparison of Participant Summary

Below is a comparison of participant summary included in the current valuation and the prior full valuation.

	As of June 30, 2022	As of June 30, 2020
Number of Participants		
Active employees	10	10
Retired employees[19]	6	6
Total	16	16
Averages		
Active average age	44.3	43.3
Active average service	8.8	8.7
Inactive average age	72.4	71.2

[19] The enrollments above include retirees only and exclude spouses and/or dependents who are covered under the District's health plans.

Appendix – Sample Decrement Rates

Mortality Rates

Mortality rates used in the valuation are based on the CalPERS Experience Study and Review of Actuarial Assumptions published in November 2021 for Public Agency Miscellaneous members. Sample pre-retirement and post-retirement non-disabled base mortality rates for Miscellaneous members are as shown below. These rates are projected fully generationally using 80% of MP-2020 mortality improvement scale.

Attained Ages	Pre-Retirement[20]		Post-Retirement Non-Disabled		Post-Retirement Disabled[21]	
	Male	Female	Male	Female	Male	Female
20	0.00039	0.00014	0.00039	0.00014	0.00411	0.00233
25	0.00033	0.00013	0.00033	0.00013	0.00346	0.00187
30	0.00044	0.00019	0.00044	0.00019	0.00482	0.00301
35	0.00058	0.00029	0.00058	0.00029	0.00644	0.00504
40	0.00075	0.00039	0.00075	0.00039	0.00807	0.00730
45	0.00093	0.00054	0.00093	0.00054	0.01114	0.01019
50	0.00134	0.00081	0.00267	0.00199	0.01701	0.01439
55	0.00198	0.00123	0.00390	0.00325	0.02210	0.01734
60	0.00287	0.00179	0.00578	0.00455	0.02708	0.01962
65	0.00403	0.00250	0.00857	0.00612	0.03334	0.02276
70	0.00594	0.00404	0.01333	0.00996	0.04001	0.02910
75	0.00933	0.00688	0.02391	0.01783	0.05376	0.04160
80	0.01515	0.01149	0.04371	0.03403	0.07936	0.06112
85	0.00000	0.00000	0.08274	0.06166	0.11561	0.09385
90	0.00000	0.00000	0.14539	0.11086	0.16608	0.14396

[20] Pre-Retirement rates for all groups are based on the sum of non-industrial death and industrial death rates.
[21] Post-Retirement Disabled rates are based on non-industrially disabled rates for Miscellaneous participants.

Salary Increases

The seniority, merit and promotional salary increases used in the valuation are based on the CalPERS Experience Study and Review of Actuarial Assumptions published in November 2021 for Public Agency Miscellaneous members. Sample rates are as shown below.

	Miscellaneous						
	Entry Ages						
Service	20	25	30	35	40	45	50
0	0.0764	0.0764	0.0621	0.0621	0.0521	0.0521	0.0521
2	0.0576	0.0576	0.0449	0.0449	0.0346	0.0346	0.0346
4	0.0435	0.0435	0.0324	0.0324	0.0229	0.0229	0.0229
6	0.0328	0.0328	0.0234	0.0234	0.0152	0.0152	0.0152
8	0.0248	0.0248	0.0170	0.0170	0.0101	0.0101	0.0101
10	0.0201	0.0201	0.0126	0.0126	0.0108	0.0108	0.0108
12	0.0181	0.0181	0.0116	0.0116	0.0092	0.0092	0.0092
14	0.0163	0.0163	0.0106	0.0106	0.0078	0.0078	0.0078
16	0.0147	0.0147	0.0098	0.0098	0.0066	0.0066	0.0066
18	0.0132	0.0132	0.0090	0.0090	0.0055	0.0055	0.0055
20	0.0119	0.0119	0.0083	0.0083	0.0047	0.0047	0.0047

Disability Rates

The disability rates used in the valuation are based on the CalPERS Experience Study and Review of Actuarial Assumptions published in November 2021 for Public Agency Miscellaneous members. Sample rates are as shown below.

Attained Ages	Miscellaneous	
	Male	Female
20	0.000070	0.000040
25	0.000070	0.000090
30	0.000170	0.000330
35	0.000350	0.000650
40	0.000910	0.001190
45	0.001490	0.001850
50	0.001540	0.001930
55	0.001390	0.001290
60	0.001240	0.000940

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Termination Rates

This assumption is used to project terminations (voluntary and involuntary) prior to meeting the minimum eligibility requirements to retire. The rates are based on the CalPERS Experience Study and Review of Actuarial Assumptions published in November 2021 for Public Agency Miscellaneous members. Sample rates are as shown below.

	Miscellaneous (Male)							Miscellaneous (Female)						
	Entry Ages													
Service	20	25	30	35	40	45	50	20	25	30	35	40	45	50
0	0.1851	0.1769	0.1631	0.1493	0.1490	0.1487	0.1509	0.1944	0.1899	0.1824	0.1749	0.1731	0.1713	0.1741
2	0.1218	0.1125	0.0970	0.0815	0.0771	0.0726	0.0750	0.1381	0.1307	0.1183	0.1058	0.0998	0.0938	0.0941
4	0.0672	0.0616	0.0524	0.0431	0.0392	0.0352	0.0366	0.0801	0.0752	0.0670	0.0587	0.0523	0.0459	0.0457
6	0.0669	0.0641	0.0575	0.0509	0.0453	0.0397	0.0383	0.0869	0.0847	0.0757	0.0666	0.0580	0.0494	0.0464
8	0.0470	0.0453	0.0410	0.0366	0.0311	0.0255	0.0218	0.0613	0.0601	0.0545	0.0488	0.0394	0.0299	0.0294
10	0.0377	0.0366	0.0337	0.0309	0.0245	0.0181	0.0032	0.0502	0.0491	0.0446	0.0401	0.0308	0.0215	0.0046
12	0.0307	0.0300	0.0282	0.0263	0.0200	0.0137	0.0027	0.0423	0.0413	0.0368	0.0322	0.0244	0.0165	0.0037
14	0.0251	0.0246	0.0226	0.0207	0.0156	0.0014	0.0017	0.0352	0.0343	0.0292	0.0241	0.0181	0.0019	0.0023
16	0.0173	0.0173	0.0152	0.0132	0.0101	0.0000	0.0000	0.0235	0.0235	0.0193	0.0151	0.0112	0.0000	0.0000
18	0.0159	0.0159	0.0129	0.0100	0.0067	0.0000	0.0000	0.0202	0.0202	0.0158	0.0113	0.0075	0.0000	0.0000
20	0.0141	0.0141	0.0110	0.0079	0.0000	0.0000	0.0000	0.0175	0.0175	0.0131	0.0087	0.0000	0.0000	0.0000

Retirement Rates

Retirement rates used in the valuation are based on the CalPERS Experience Study and Review of Actuarial Assumptions published in November 2021 for Public Agency Miscellaneous members. Sample rates are as shown below.

	Miscellaneous 2.7% at 55						Miscellaneous 2% at 62					
	Attained Ages											
Service	50	55	60	65	70	75	50	55	60	65	70	75
5	0.0110	0.0450	0.0870	0.1820	0.2270	1.0000	0.0000	0.0100	0.0310	0.1080	0.1200	1.0000
10	0.0160	0.0580	0.0840	0.2010	0.2270	1.0000	0.0000	0.0190	0.0510	0.1410	0.1560	1.0000
15	0.0220	0.0820	0.0960	0.2420	0.2270	1.0000	0.0000	0.0280	0.0710	0.1730	0.1930	1.0000
20	0.0330	0.1380	0.1420	0.2640	0.2270	1.0000	0.0000	0.0360	0.0910	0.2060	0.2290	1.0000
25	0.0340	0.2080	0.1650	0.2930	0.2270	1.0000	0.0000	0.0610	0.1110	0.2390	0.2650	1.0000
30	0.0380	0.2780	0.1980	0.2930	0.2270	1.0000	0.0000	0.0960	0.1380	0.3000	0.3330	1.0000
35	0.0440	0.3410	0.2230	0.2930	0.2270	1.0000	0.0000	0.1520	0.1830	0.3480	0.3870	1.0000
40	0.0000	0.3410	0.2230	0.2930	0.2270	1.0000	0.0000	0.1800	0.2040	0.3600	0.4000	1.0000

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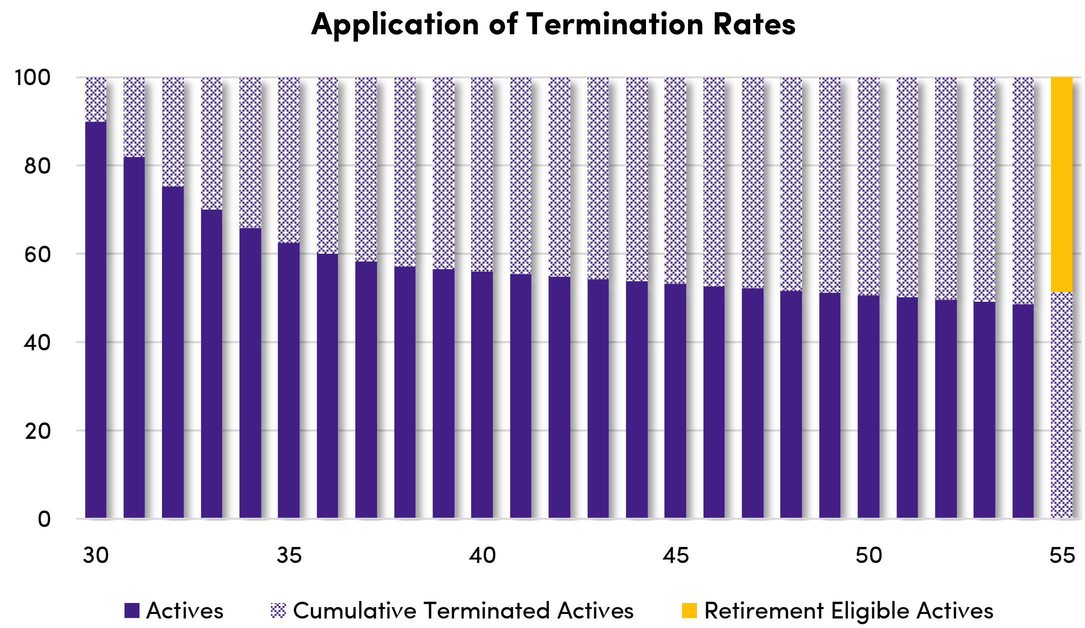
Decrements Illustration

The table below illustrates how decrements are applied in the valuation and how the decrements affect the liabilities valued. Assuming the Plan Sponsor has 100 employees aged 30 as of the valuation date, only 48.6 employees will be projected to be employed at age 55 (assumed retirement eligibility age) using the assumed illustrative termination rates.

Age	# Actives BOY	Annual Termination %	# Terminated Actives / Year
30	100.0	10%	10.0
31	90.0	9%	8.1
32	81.9	8%	6.6
33	75.3	7%	5.3
34	70.1	6%	4.2
35	65.9	5%	3.3
36	62.6	4%	2.5
37	60.1	3%	1.8
38	58.3	2%	1.2
39	57.1	1%	0.6
40	56.5	1%	0.6
41	56.0	1%	0.6
42	55.4	1%	0.6
43	54.9	1%	0.5
44	54.3	1%	0.5
45	53.8	1%	0.5
46	53.2	1%	0.5
47	52.7	1%	0.5
48	52.2	1%	0.5
49	51.6	1%	0.5
50	51.1	1%	0.5
51	50.6	1%	0.5
52	50.1	1%	0.5
53	49.6	1%	0.5
54	49.1	1%	0.5
55	**48.6**	0%	0.0



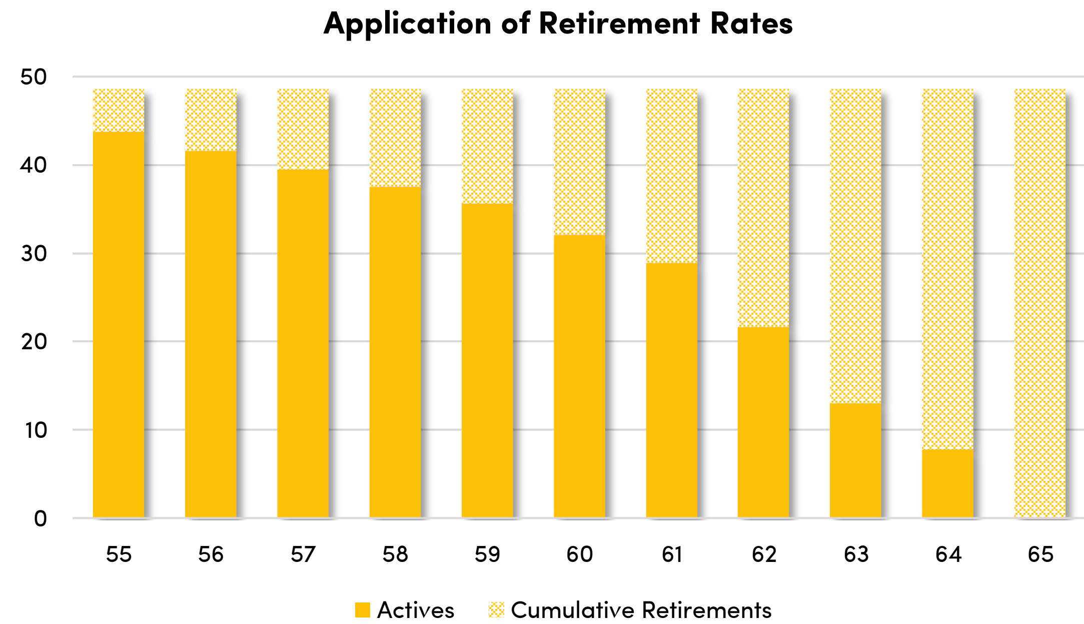
Notes:

1. The annual termination percentages shown in the table are for illustrative purposes only, not the actual termination rates used in the valuation.
2. For simplification, only termination decrement is assumed to be applicable while actively employed. Actuarial valuation typically applies pre-retirement death decrement during employment as well.

Decrements Illustration (Continued)

The table below illustrates the number of active employees assumed to retire at each age based on the illustrative retirement rates.

Age	# Actives BOY	Annual Retirement %	# Retirements / Year
55	48.6	10%	4.9
56	43.8	5%	2.2
57	41.6	5%	2.1
58	39.5	5%	2.0
59	37.5	5%	1.9
60	35.6	10%	3.6
61	32.1	10%	3.2
62	28.9	25%	7.2
63	21.7	40%	8.7
64	13.0	40%	5.2
65	7.8	100%	7.8



Notes:

1. The annual retirement percentages shown in the table are for illustrative purposes only, not the actual retirement rates used in the valuation.
2. For simplification, only retirement decrement is assumed to be applicable once the employee is retirement eligible. Actuarial valuation typically applies pre-retirement death decrement once an employee is eligible to retire.
3. The illustration above assumes that all active employees who are projected to be employed at age 55 elect health coverage with the Plan Sponsor at retirement.

Appendix – Glossary

1. **Active Employees** – Individuals employed at the end of the reporting or measurement period, as applicable.

2. **Actuarial Cost Method** – A method to allocate the Actuarial Present Value of Future Benefits into portions attributed to past service (Total OPEB Liability) and future service (Normal Cost).

3. **Actuarial Present Value of Future Benefits –** Projected benefit payments estimated to be payable through the OPEB plan to current active and inactive employees as a result of their past service and their expected future service, discounted to reflect the expected effects of time value (present value) of money and the probabilities of payment (which is contingent on events such as death, termination, retirement, etc). In other words, this is the amount that would have been invested as of the Valuation Date so that it is sufficient to pay for benefit payments when due.

4. **Deferred Inflows** – Gains in the Total OPEB Liability and Fiduciary Net Position (for funded plan only) due to be recognized in the future.

5. **Deferred Outflows** – Losses in the Total OPEB Liability and Fiduciary Net Position (for funded plan only) due to be recognized in the future.

6. **Defined Benefit OPEB –** OPEB for which the benefits that the employee will receive at or after separation from employment are defined by the benefit terms. The OPEB may be stated as (a) a specified dollar amount; (b) an amount that is calculated

7. **Entry Age Actuarial Cost Method –** A method that allocates the actuarial present value of the projected benefits of each individual on a level basis over the earnings or service of the individual between entry age and assumed exit age(s).

   - The portion allocated to a valuation year is called the Normal Cost.
   - The portion allocated to past periods is called the Total OPEB Liability.
   - The portion allocated to future periods after the valuation date is called the Present Value of Future Normal Costs.

8. **Fiduciary Net Position –** OPEB plan assets in a secure Trust that meet the following criteria:

   - Contributions from employers to the OPEB plan and earnings on those contributions are irrevocable.
   - OPEB plan assets are dedicated to providing OPEB to plan members in accordance with the benefit terms.
   - OPEB Plan assets are legally protected from the creditors of employers, OPEB plan administrator, and creditors of the plan members.

9. **Funded Ratio –** The value of the asset expressed as a percentage of the Total OPEB Liability.

10. **Healthcare Cost Trend Rates –** The rates of change in per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.
11. **Inactive Employees –** Individuals no longer employed by an employer in the OEPB plan or the beneficiaries of those individuals. Inactive employees also include individuals who have accumulated benefits under the terms of an OPEB plan but are not yet receiving benefit payments and individuals currently receiving benefits.
12. **Net OPEB Liability –** The difference between the Total OPEB Liability and the Fiduciary Net Position.
13. **Payroll Growth –** An actuarial assumption on the rate of future increase in the total coverage payroll attributable to wage inflation and productivity increase; used in the Actuarial Cost Method to determine the Total OPEB Liability.
14. **Plan Members –** Individuals covered by the terms of the OPEB plan, which would typically include employees in active service, terminated employees who have terminated service but are not yet receiving benefit payments, and retired employees who are currently receiving benefits.
15. **Other Postemployment Benefits (OPEB) –** Benefits such as death benefits, life insurance, disability, and long-term care, as well as healthcare benefits (medical, prescription drug, dental, vision, and other health-related benefits), that are paid in the period after employment and that are provided separately from a pension plan regardless of the manner in which they are provided. OPEB does not include termination benefits or termination payments for sick leave.
16. **Service Cost (Normal Cost) –** The portion of actuarial present value of projected benefit payments that are attributed to a 12-month period after a valuation date as determined by the Actuarial Cost Method.
17. **Total OPEB Liability –** The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service as of the valuation date as determined by the Actuarial Cost Method.

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Item #4

California Public Employees' Retirement System
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888 CalPERS (or **888**-225-7377) | TTY: (877) 249-7442 | **www.calpers.ca.gov**

July 2023

Miscellaneous Plan of the Sanitary District No. 5 of Marin County (CalPERS ID: 4163206459)
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 CalPERS Board of Administration (board) adopts these assumptions after considering the advice of CalPERS actuarial and investment teams and other professionals. Each actuarial valuation reflects all prior differences between actual and assumed experience and adjusts the contribution 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 CalPERS 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	16.02%	$31,798
Projected Results		
2025-26	*16.0%*	*$47,000*

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

CalPERS

Actuarial Valuation as of June 30, 2022

for the Miscellaneous Plan of the Sanitary District No. 5 of Marin County

(CalPERS ID: 4163206459)

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

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Section 1

Plan Specific Information
for the
Miscellaneous Plan
of the
Sanitary District No. 5 of Marin County

(CalPERS ID: 4163206459)
(Rate Plan ID: 1600)

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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 Sanitary District No. 5 of Marin County 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 Sanitary District No. 5 of Marin County, 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.

SHELLY CHU, ASA, MAAA
Senior 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 Sanitary District No. 5 of Marin County 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 Sanitary District No. 5 of Marin County 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 CalPERS 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

Required Employer Contributions	Fiscal Year 2024-25
Employer Normal Cost Rate	**16.02%**
Plus	
Required Payment on Amortization Bases[1]	**$31,798**
Paid either as	
1) Monthly Payment	**$2,649.83**
Or	
2) Annual Prepayment Option*	**$30,769**

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

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

Development of Normal Cost as a Percentage of Payroll	Fiscal Year 2023-24	Fiscal Year 2024-25
Base Total Normal Cost for Formula	23.13%	23.20%
Surcharge for Class 1 Benefits[2]		
a) FAC 1	0.78%	0.78%
Phase out of Normal Cost Difference[3]	0.00%	0.00%
Plan's Total Normal Cost	23.91%	23.98%
Offset Due to Employee Contributions	7.96%	7.96%
Employer Normal Cost Rate	15.95%	16.02%

[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 between the pool and the rate plan is phased out over a five-year period in accordance with the CalPERS contribution allocation policy.

Additional Discretionary Employer Contributions

The minimum required employer contribution towards the Unfunded Accrued Liability (UAL) for this rate plan for FY 2024-25 is $31,798. 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 Normal Cost	Minimum UAL Payment	ADP	Total UAL Contribution	Estimated Total Contribution
$106,214	$31,798	$0	$31,798	$138,012

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 **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 Normal Cost	Minimum UAL Payment	ADP[1]	Total UAL Contribution	Estimated Total Contribution
$106,214	$31,798	$27,114	$58,912	$165,126

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	$106,214	$31,798	$48,713	$80,511	$186,725
15 years	$106,214	$31,798	$62,125	$93,923	$200,137
10 years	$106,214	$31,798	$90,413	$122,211	$228,425
5 years	$106,214	$31,798	$178,367	$210,165	$316,379

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

Note that the calculations above are based on the projected 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	$12,249,892	$12,800,349
2. Entry Age Accrued Liability	10,802,390	11,444,162
3. Market Value of Assets (MVA)	11,792,705	10,661,143
4. Unfunded Accrued Liability (UAL) [(2) – (3)]	($990,315)	$783,019
5. Funded Ratio [(3) / (2)]	109.2%	93.2%

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	$12,956,445	$11,444,162	$10,193,037
2. Market Value of Assets (MVA)	10,661,143	10,661,143	10,661,143
3. Unfunded Accrued Liability (UAL) [(1) – (2)]	$2,295,302	$783,019	($468,106)
4. Funded Ratio [(2) / (1)]	82.3%	93.2%	104.6%

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 1600 Results					
Normal Cost %	16.02%	16.0%	16.0%	16.0%	16.0%	16.0%
UAL Payment	$31,798	$47,000	$62,000	$78,000	$93,000	$93,000

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 CalPERS 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 1600. 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 2023-24	Fiscal Year 2024-25
Estimated Combined Employer Contributions for all Pooled Miscellaneous Rate Plans		
Projected Payroll for the Contribution Year	$1,189,021	$1,261,958
Estimated Employer Normal Cost	$155,013	$153,351
Required Payment on Amortization Bases	$0	$33,901
Estimated Total Employer Contributions	$155,013	$187,252
Estimated Total Employer Contribution Rate (illustrative only)	13.04%	14.84%

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 CalPERS' best estimate of future experience of the plan and are long term in nature. We recognize that all assumptions will not be realized in any given year. For example, the investment earnings at CalPERS have averaged 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, CalPERS 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 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 July 1, 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 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 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	$2,646,547
Transferred Members	303,973
Separated Members	154,848
Members and Beneficiaries Receiving Payments	8,338,794
Total	$11,444,162

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	$11,444,162
2.	Projected UAL Balance at 6/30/2022	(1,046,443)
3.	Other UAL Adjustments (Golden Handshake, Prior Service Purchase, etc.)	0
4.	Adjusted UAL Balance at 6/30/2022 for Asset Share	(1,046,443)
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)	1,668,627
10.	Plan's Share of Pool's Non-Investment (Gain)/Loss: (1) ÷ (5) × (8)	160,835
11.	Plan's New (Gain)/Loss as of 6/30/2022: (9) + (10)	1,829,462
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) ÷ (5) × (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) ÷ (5) × (14)	0
16.	Offset due to Funding Risk Mitigation	0
17.	Plan's Investment (Gain)/Loss: (9) – (16)	1,668,627
18.	Partial Fresh Start Base: (2) + (17)	622,184

[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)	$783,019
20.	Plan's Share of Pool's MVA: (1) - (19)	$10,661,143

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.

Reason for Base	Date Est.	Ramp Level 2024-25	Ramp Shape	Escala-tion Rate	Amort. Period	Balance 6/30/22	Expected Payment 2022-23	Balance 6/30/23	Expected Payment 2023-24	Balance 6/30/24	Minimum Required Payment 2024-25
Non-Investment (Gain)/Loss	6/30/22	No Ramp		0.00%	20	160,835	0	171,772	0	183,452	16,497
Partial Fresh Start	6/30/22	20%	Up Only	0.00%	20	622,184	(1,987)	666,546	0	711,871	15,301
Total						**783,019**	**(1,987)**	**838,318**	**0**	**895,323**	**31,798**

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

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

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

	Current Amortization Schedule		Alternate Schedules			
			20 Year Amortization		15 Year Amortization	
Date	Balance	Payment	Balance	Payment	Balance	Payment
6/30/2024	895,323	31,798	895,323	80,511	895,323	93,923
6/30/2025	923,344	47,100	873,002	80,511	859,141	93,923
6/30/2026	937,456	62,401	849,163	80,511	820,499	93,923
6/30/2027	936,715	77,703	823,703	80,511	779,229	93,923
6/30/2028	920,110	93,003	796,511	80,511	735,153	93,923
6/30/2029	886,564	93,004	767,470	80,510	688,080	93,923
6/30/2030	850,737	93,004	736,456	80,511	637,806	93,923
6/30/2031	812,473	93,003	703,332	80,510	584,113	93,922
6/30/2032	771,608	93,004	667,956	80,511	526,770	93,923
6/30/2033	727,963	93,004	630,174	80,510	465,526	93,922
6/30/2034	681,351	93,005	589,824	80,511	400,119	93,922
6/30/2035	631,567	93,003	546,729	80,511	330,264	93,923
6/30/2036	578,401	93,004	500,703	80,511	255,658	93,922
6/30/2037	521,618	93,004	451,547	80,510	175,980	93,923
6/30/2038	460,974	93,004	399,050	80,510	90,883	93,922
6/30/2039	396,206	93,004	342,983	80,511		
6/30/2040	327,034	93,004	283,102	80,510		
6/30/2041	253,158	93,004	219,151	80,511		
6/30/2042	174,259	93,004	150,850	80,510		
6/30/2043	89,994	93,003	77,905	80,510		
6/30/2044						
6/30/2045						
6/30/2046						
6/30/2047						
6/30/2048						
6/30/2049						
Total		**1,707,063**		**1,610,212**		**1,408,840**
Interest Paid		**811,740**		**714,889**		**513,517**
Estimated Savings				**96,851**		**298,223**

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	11.634%	$95,473	N/A
2017 - 18	11.675%	6,544	N/A
2018 - 19	12.212%	11,453	N/A
2019 - 20	13.182%	0	120,889
2020 - 21	14.194%	9,421	93,691
2021 - 22	14.02%	5,208	0
2022 - 23	14.03%	9,168	0
2023 - 24	15.95%	0	
2024 - 25	16.02%	31,798	

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	$8,079,203	$5,116,351	$2,962,852	63.3%	$731,558
06/30/2014	8,641,167	5,771,537	2,869,630	66.8%	579,584
06/30/2015	8,938,169	7,009,156	1,929,013	78.4%	657,981
06/30/2016	9,226,725	8,312,910	913,815	90.1%	688,199
06/30/2017	8,609,000	8,033,469	575,531	93.3%	711,792
06/30/2018	9,044,697	8,949,323	95,374	98.9%	742,097
06/30/2019	9,947,297	9,747,604	199,693	98.0%	652,116
06/30/2020	10,219,714	9,862,695	357,019	96.5%	675,560
06/30/2021	10,802,390	11,792,705	(990,315)	109.2%	708,976
06/30/2022	11,444,162	10,661,143	783,019	93.2%	616,232

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 CalPERS 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 through 2041-42	Projected Employer Contributions				
	2025-26	2026-27	2027-28	2028-29	2029-30
3.0% (5th percentile)					
Normal Cost Rate	16.0%	16.0%	16.0%	16.0%	16.0%
UAL Contribution	$57,000	$92,000	$138,000	$194,000	$246,000
10.8% (95th percentile)					
Normal Cost Rate	16.3%	16.7%	17.0%	17.3%	17.6%
UAL Contribution	$39,000	$37,000	$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	16.02%	16.0%
UAL Contribution	$31,798	$110,000
(5.2)% (1 standard deviation loss)		
Normal Cost Rate	16.02%	16.0%
UAL Contribution	$31,798	$78,000

- 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	30.25%	23.98%	19.22%
b) Accrued Liability	$12,956,445	$11,444,162	$10,193,037
c) Market Value of Assets	$10,661,143	$10,661,143	$10,661,143
d) Unfunded Liability/(Surplus) [(b) - (c)]	$2,295,302	$783,019	($468,106)
e) Funded Ratio	82.3%	93.2%	104.6%

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	25.16%	23.98%	21.88%
b) Accrued Liability	$11,807,516	$11,444,162	$10,551,913
c) Market Value of Assets	$10,661,143	$10,661,143	$10,661,143
d) Unfunded Liability/(Surplus) [(b) - (c)]	$1,146,373	$783,019	($109,230)
e) Funded Ratio	90.3%	93.2%	101.0%

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, namely assuming 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	24.36%	23.98%	23.62%
b) Accrued Liability	$11,675,097	$11,444,162	$11,231,476
c) Market Value of Assets	$10,661,143	$10,661,143	$10,661,143
d) Unfunded Liability/(Surplus) [(b) - (c)]	$1,013,954	$783,019	$570,333
e) Funded Ratio	91.3%	93.2%	94.9%

Maturity Measures

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

Since it is the employer that bears the risk, it is appropriate to perform this analysis on a pension plan level considering all rate plans. The following measures are for one rate plan only. One way to look at the maturity level of CalPERS and its plans is to look at the ratio of a plan's retiree liability to its total liability. A pension plan in its infancy will have a very low ratio of retiree liability to total liability. As the plan matures, the ratio starts increasing. A mature plan will often have a ratio above 60%-65%.

Ratio of Retiree Accrued Liability to Total Accrued Liability	June 30, 2021	June 30, 2022
1. Retired Accrued Liability	$7,377,732	$8,338,794
2. Total Accrued Liability	10,802,390	11,444,162
3. Ratio of Retiree AL to Total AL [(1) / (2)]	0.68	0.73

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 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.

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	5	4
2. Number of Retirees	11	12
3. Support Ratio [(1) / (2)]	0.45	0.33

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	$11,792,705	$10,661,143
2. Payroll	708,976	616,232
3. Asset Volatility Ratio (AVR) [(1) / (2)]	16.6	17.3
4. Accrued Liability	$10,802,390	$11,444,162
5. Liability Volatility Ratio (LVR) [(4) / (2)]	15.2	18.6

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	0.71	0.67	11.3	12.1
06/30/2018	0.67	0.67	12.1	12.2
06/30/2019	0.73	0.50	14.9	15.3
06/30/2020	0.71	0.50	14.6	15.1
06/30/2021	0.68	0.45	16.6	15.2
06/30/2022	0.73	0.33	17.3	18.6

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%			Discount Rate: 4.50% Price Inflation: 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**
$10,661,143	$22,306,690	47.8%	$11,645,547	$14,282,002	74.6%	$3,620,859

[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 w here 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	5	4
Average Attained Age	44.4	42.4
Average Entry Age to Rate Plan	29.6	26.8
Average Years of Credited Service	14.6	15.3
Average Annual Covered Pay	$141,795	$154,058
Annual Covered Payroll	$708,976	$616,232
Present Value of Future Payroll	$7,149,207	$6,831,009
Transferred Members	3	3
Separated Members	2	2
Retired Members and Beneficiaries*		
Counts	11	12
Average Annual Benefits	$50,630	$53,324
Total Annual Benefits	$556,930	$639,886

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

* Values include community property settlements.

List of Class 1 Benefit Provisions

This plan has the additional Class 1 Benefit Provisions:

- One Year Final Compensation (FAC 1)

Plan's Major Benefit Options

Shown below is a summary of the major <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	No	Yes	
Transfers/Separated	Yes	Yes	
Receiving	Yes	Yes	
Benefit Provision			
Benefit Formula	2% @ 55	2.7% @ 55	
Social Security Coverage	Yes	Yes	
Full/Modified	Full	Full	
Employee Contribution Rate		8.00%	
Final Average Compensation Period	One Year	One Year	
Sick Leave Credit	Yes	Yes	
Non-Industrial Disability	Standard	Standard	
Industrial Disability	No	No	
Pre-Retirement Death Benefits			
Optional Settlement 2	Yes	Yes	
1959 Survivor Benefit Level	No	No	
Special	No	No	
Alternate (firefighters)	No	No	
Post-Retirement Death Benefits			
Lump Sum	$2000	$2000	
Survivor Allowance (PRSA)	No	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

Item #5

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 Sanitary District No. 5 of Marin County (CalPERS ID: 4163206459)
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 CalPERS Board of Administration (board) adopts these assumptions after considering the advice of CalPERS actuarial and investment teams and other professionals. Each actuarial valuation reflects all prior differences between actual and assumed experience and adjusts the contribution 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 CalPERS 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%	$2,103	7.75%
Projected Results			
2025-26	*7.9%*	*$3,300*	*TBD*

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 Sanitary District No. 5 of Marin County

(CalPERS ID: 4163206459)

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

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Section 1

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Plan Specific Information for the PEPRA Miscellaneous Plan of the Sanitary District No. 5 of Marin County

(CalPERS ID: 4163206459)
(Rate Plan ID: 27151)

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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 Sanitary District No. 5 of Marin County 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 Sanitary District No. 5 of Marin County, 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.

SHELLY CHU, ASA, MAAA
Senior 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 Sanitary District No. 5 of Marin County 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 Sanitary District No. 5 of Marin County 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 CalPERS 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]	**$2,103**
Paid either as	
1) Monthly Payment	**$175.25**
Or	
2) Annual Prepayment Option*	**$2,035**
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 2023-24	Fiscal Year 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 between the pool and the rate plan is phased out over a five-year period in accordance with the CalPERS contribution allocation policy.

Additional Discretionary Employer Contributions

The minimum required employer contribution towards the Unfunded Accrued Liability (UAL) for this rate plan for FY 2024-25 is $2,103. 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 Normal Cost	Minimum UAL Payment	ADP	Total UAL Contribution	Estimated Total Contribution
$47,137	$2,103	$0	$2,103	$49,240

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 Normal Cost	Minimum UAL Payment	ADP[1]	Total UAL Contribution	Estimated Total Contribution
$47,137	$2,103	$2,267	$4,370	$51,507

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	$47,137	$2,103	$3,870	$5,973	$53,110
15 years	$47,137	$2,103	$4,865	$6,968	$54,105
10 years	$47,137	$2,103	$6,963	$9,066	$56,203
5 years	$47,137	$2,103	$13,488	$15,591	$62,728

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

Note that the calculations above are based on the projected 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	$1,122,379	$1,502,801
2. Entry Age Accrued Liability	484,456	616,299
3. Market Value of Assets (MVA)	531,564	563,613
4. Unfunded Accrued Liability (UAL) [(2) – (3)]	($47,108)	$52,686
5. Funded Ratio [(3) / (2)]	109.7%	91.5%

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	$734,037	$616,299	$520,750
2. Market Value of Assets (MVA)	563,613	563,613	563,613
3. Unfunded Accrued Liability (UAL) [(1) – (2)]	$170,424	$52,686	($42,863)
4. Funded Ratio [(2) / (1)]	76.8%	91.5%	108.2%

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 27151 Results					
Normal Cost %	7.87%	7.9%	7.9%	7.9%	7.9%	7.9%
UAL Payment	$2,103	$3,300	$4,500	$5,700	$7,000	$7,000

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 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 CalPERS 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 27151. 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 2023-24	Fiscal Year 2024-25
Estimated Combined Employer Contributions for all Pooled Miscellaneous Rate Plans		
Projected Payroll for the Contribution Year	$1,189,021	$1,261,958
Estimated Employer Normal Cost	$155,013	$153,351
Required Payment on Amortization Bases	$0	$33,901
Estimated Total Employer Contributions	$155,013	$187,252
Estimated Total Employer Contribution Rate (illustrative only)	13.04%	14.84%

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 CalPERS' best estimate of future experience of the plan and are long term in nature. We recognize that all assumptions will not be realized in any given year. For example, the investment earnings at CalPERS have averaged 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, CalPERS 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 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 July 1, 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 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 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	$596,997
Transferred Members	8,735
Separated Members	10,567
Members and Beneficiaries Receiving Payments	0
Total	$616,299

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	$616,299
2.	Projected UAL Balance at 6/30/2022	(44,213)
3.	Other UAL Adjustments (Golden Handshake, Prior Service Purchase, etc.)	0
4.	Adjusted UAL Balance at 6/30/2022 for Asset Share	(44,213)
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)	88,238
10.	Plan's Share of Pool's Non-Investment (Gain)/Loss: (1) ÷ (5) × (8)	8,661
11.	Plan's New (Gain)/Loss as of 6/30/2022: (9) + (10)	96,899
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) ÷ (5) × (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) ÷ (5) × (14)	0
16.	Offset due to Funding Risk Mitigation	0
17.	Plan's Investment (Gain)/Loss: (9) – (16)	88,238
18.	Partial Fresh Start Base: (2) + (17)	44,025

[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)	$52,686
20.	Plan's Share of Pool's MVA: (1) - (19)	$563,613

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.

Reason for Base	Date Est.	Ramp Level 2024-25	Ramp Shape	Escala-tion Rate	Amort. Period	Balance 6/30/22	Expected Payment 2022-23	Balance 6/30/23	Expected Payment 2023-24	Balance 6/30/24	Minimum Required Payment 2024-25
Non-Investment (Gain)/Loss	6/30/22	No Ramp		0.00%	20	8,661	0	9,250	0	9,879	888
Partial Fresh Start	6/30/22	20%	Up Only	0.00%	20	44,025	(5,731)	52,941	0	56,541	1,215
Total						**52,686**	**(5,731)**	**62,191**	**0**	**66,420**	**2,103**

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

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

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

	Current Amortization Schedule		Alternate Schedules			
			20 Year Amortization		15 Year Amortization	
Date	Balance	Payment	Balance	Payment	Balance	Payment
6/30/2024	66,420	2,103	66,420	5,973	66,420	6,968
6/30/2025	68,763	3,319	64,764	5,973	63,736	6,968
6/30/2026	70,009	4,534	62,995	5,973	60,869	6,968
6/30/2027	70,084	5,749	61,106	5,973	57,807	6,968
6/30/2028	68,908	6,965	59,088	5,973	54,537	6,968
6/30/2029	66,396	6,965	56,933	5,972	51,045	6,968
6/30/2030	63,713	6,965	54,633	5,973	47,315	6,968
6/30/2031	60,848	6,966	52,175	5,972	43,331	6,967
6/30/2032	57,787	6,965	49,551	5,973	39,078	6,968
6/30/2033	54,519	6,966	46,748	5,972	34,534	6,967
6/30/2034	51,027	6,965	43,755	5,973	29,682	6,967
6/30/2035	47,299	6,966	40,558	5,973	24,500	6,967
6/30/2036	43,317	6,966	37,143	5,972	18,966	6,968
6/30/2037	39,064	6,965	33,497	5,972	13,055	6,968
6/30/2038	34,522	6,965	29,603	5,973	6,742	6,967
6/30/2039	29,672	6,965	25,443	5,972		
6/30/2040	24,492	6,965	21,001	5,972		
6/30/2041	18,960	6,966	16,257	5,972		
6/30/2042	13,051	6,966	11,191	5,973		
6/30/2043	6,739	6,964	5,779	5,972		
6/30/2044						
6/30/2045						
6/30/2046						
6/30/2047						
6/30/2048						
6/30/2049						
Total		**127,150**		**119,451**		**104,515**
Interest Paid		**60,730**		**53,031**		**38,095**
Estimated Savings				**7,699**		**22,635**

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	6.555%	$0	N/A
2017 - 18	6.533%	29	N/A
2018 - 19	6.842%	2,414	N/A
2019 - 20	6.985%	665	10,888
2020 - 21	7.732%	2,569	2,676
2021 - 22	7.59%	665	0
2022 - 23	7.47%	335	0
2023 - 24	7.68%	0	
2024 - 25	7.87%	2,103	

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	$6,346	$8,514	($2,168)	134.2%	$121,212
06/30/2014	31,160	35,083	(3,923)	112.6%	133,674
06/30/2015	64,286	64,522	(236)	100.4%	154,016
06/30/2016	106,798	98,456	8,342	92.2%	168,222
06/30/2017	160,216	153,810	6,406	96.0%	241,457
06/30/2018	231,317	226,198	5,119	97.8%	260,318
06/30/2019	287,584	275,704	11,880	95.9%	344,756
06/30/2020	372,715	360,407	12,308	96.7%	418,798
06/30/2021	484,456	531,564	(47,108)	109.7%	385,510
06/30/2022	616,299	563,613	52,686	91.5%	545,392

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 CalPERS 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 through 2041-42	Projected Employer Contributions				
	2025-26	2026-27	2027-28	2028-29	2029-30
3.0% (5th percentile)					
Normal Cost Rate	7.9%	7.9%	7.9%	7.9%	7.9%
UAL Contribution	$3,800	$6,100	$8,900	$12,000	$15,000
10.8% (95th percentile)					
Normal Cost Rate	8.1%	8.3%	8.5%	8.7%	8.4%
UAL Contribution	$2,900	$3,200	$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	7.87%	7.9%
UAL Contribution	$2,103	$6,600
(5.2)% (1 standard deviation loss)		
Normal Cost Rate	7.87%	7.9%
UAL Contribution	$2,103	$5,000

- 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	19.53%	15.62%	12.65%
b) Accrued Liability	$734,037	$616,299	$520,750
c) Market Value of Assets	$563,613	$563,613	$563,613
d) Unfunded Liability/(Surplus) [(b) - (c)]	$170,424	$52,686	($42,863)
e) Funded Ratio	76.8%	91.5%	108.2%

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	16.48%	15.62%	14.20%
b) Accrued Liability	$644,463	$616,299	$561,692
c) Market Value of Assets	$563,613	$563,613	$563,613
d) Unfunded Liability/(Surplus) [(b) - (c)]	$80,850	$52,686	($1,921)
e) Funded Ratio	87.5%	91.5%	100.3%

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, namely assuming 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	$629,098	$616,299	$604,503
c) Market Value of Assets	$563,613	$563,613	$563,613
d) Unfunded Liability/(Surplus) [(b) - (c)]	$65,485	$52,686	$40,890
e) Funded Ratio	89.6%	91.5%	93.2%

Maturity Measures

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

Since it is the employer that bears the risk, it is appropriate to perform this analysis on a pension plan level considering all rate plans. The following measures are for one rate plan only. One way to look at the maturity level of CalPERS and its plans is to look at the ratio of a plan's retiree liability to its total liability. A pension plan in its infancy will have a very low ratio of retiree liability to total liability. As the plan matures, the ratio starts increasing. A mature plan will often have a ratio above 60%-65%.

Ratio of Retiree Accrued Liability to Total Accrued Liability	June 30, 2021	June 30, 2022
1. Retired Accrued Liability	$0	$0
2. Total Accrued Liability	484,456	616,299
3. Ratio of Retiree AL to Total AL [(1) / (2)]	0.00	0.00

Another measure of maturity level of CalPERS and its plans is to look at the ratio of actives to retirees, also called the support ratio. A pension plan in its infancy will have a very high ratio of active to retired members. As the plan matures and members retire, the ratio declines. 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.

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	6
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	$531,564	$563,613
2. Payroll	385,510	545,392
3. Asset Volatility Ratio (AVR) [(1) / (2)]	1.4	1.0
4. Accrued Liability	$484,456	$616,299
5. Liability Volatility Ratio (LVR) [(4) / (2)]	1.3	1.1

Maturity Measures History

Valuation Date	Ratio of Retiree Accrued Liability to Total Accrued Liability	Support Ratio	Asset Volatility Ratio	Liability Volatility Ratio
06/30/2017	0.00	N/A	0.6	0.7
06/30/2018	0.00	N/A	0.9	0.9
06/30/2019	0.00	N/A	0.8	0.8
06/30/2020	0.00	N/A	0.9	0.9
06/30/2021	0.00	N/A	1.4	1.3
06/30/2022	0.00	N/A	1.0	1.1

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%			Discount Rate: 4.50% Price Inflation: 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**
$563,613	$1,258,763	44.8%	$695,150	$692,121	81.4%	$128,508

[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 w here 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	4	6
Average Attained Age	45.8	45.7
Average Entry Age to Rate Plan	40.7	41.3
Average Years of Credited Service	5.1	4.3
Average Annual Covered Pay	$96,378	$90,899
Annual Covered Payroll	$385,510	$545,392
Present Value of Future Payroll	$3,918,297	$5,386,016
Transferred Members	1	1
Separated Members	1	1
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	Yes
Transfers/Separated	Yes
Receiving	No
Benefit Provision	
Benefit Formula	2% @ 62
Social Security Coverage	Yes
Full/Modified	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	Yes
1959 Survivor Benefit Level	No
Special	No
Alternate (firefighters)	No
Post-Retirement Death Benefits	
Lump Sum	$2000
Survivor Allowance (PRSA)	No
COLA	2%

PEPRA Member Contribution Rates

The California Public Employees' Pension Reform Act of 2013 (PEPRA) established new benefit formulas, final compensation period, and contribution requirements for "new" employees (generally those first hired into a CalPERS-covered position on or after January 1, 2013). In accordance with Government Code Section 7522.30(b), "new members ... shall have an initial contribution rate of at least 50% of the normal cost rate." The normal cost 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 Current Rate		Rates Effective July 1, 2024			
Rate Plan Identifier	Benefit Group Name	Total Normal Cost	Member Rate	Total Normal Cost	Change	Change Needed	Member Rate
27151	Miscellaneous PEPRA Level	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