



SANTA CLARA VALLEY WATER DISTRICT

NON-AGENDA

April 24, 2026

Board Policy EL-7 Communication and Support to the Board
The BAOs shall inform and support the Board in its work.

Page	<u>CEO BULLETIN & NEWSLETTERS</u>
3	CEO Bulletin: 04/23/26
	<u>BOARD MEMBER REQUESTS & INFORMATIONAL ITEMS</u>
	BMR/IBMR Weekly Reports: None
5	Memo from Darin Taylor, Chief Financial Officer, to the board, dated 04/16/26, providing the OPEB Actuarial Valuation Report as of June 30, 2025
	<u>INCOMING BOARD CORRESPONDENCE</u>
	Board Correspondence Weekly Report: None
42	Email from Richard Sanquini to the board, dated 04/16/26, requesting an inspection of an oak tree located in the creek bank behind their property. BC-26-0036
43	Email from Paul Statchen to the board and addressed to the engineering team, dated 04/18/26, proposing a remediation strategy for the Almaden/Guadalupe watershed. BC-26-0037
	<u>OUTGOING BOARD CORRESPONDENCE</u>
48	Email from Director Varela to Sharon Luna, dated 04/21/26, responding to their inquiry about groundwater charges and the protest process.

CEO BULLETIN

BOARD MEMBER REQUESTS and Informational Items



MEMORANDUM

FC 14 (01-25-23)

TO: Board of Directors

FROM: Darin Taylor

SUBJECT: OPEB Actuarial Valuation Report as of June 30, 2025

DATE: April 16, 2026

Please refer to the attached Other Post Employment Benefits (OPEB) Actuarial Valuation Report from Valley Water's consulting actuary, Rael & Letson. The report provides detailed information that supports the calculation of OPEB unfunded liability as of June 30, 2025, and the projected payoff of the unfunded liability by Fiscal Year 2041-42. The information on OPEB unfunded liability provided to the Board at the Board meeting on March 24, 2026 under item 3.5 is based on the attached report. Please contact the Clerk of the Board if you would like a 1:1 meeting with the consulting actuary.

Please let me know if any questions.

Darin Taylor

Digitally signed by Darin Taylor
Date: 2026.04.16 12:11:24
-07'00'

Darin Taylor
Chief Financial Officer
Office of the Chief Executive Officer

Cc: Melanie Richardson, Oliva Manaloto



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June 30, 2025 Actuarial Valuation for 2025/26, 2026/27 and 2027/28 Plan Funding

**Santa Clara Valley Water District
Retiree Healthcare Plan**


April 2026



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Executive Summary

Background

The District pays medical premiums, including Medicare Part B premiums, for employees who directly retire from the District and meet the service eligibility requirements. For hires before March 1, 2007, 10 years of service is required for retiree-only coverage and an additional 5 years is required for 1 dependent. For hires after March 1, 2007, 15 years of service is required for retiree-only coverage and an additional 5 years is required for 1 dependent. The District pays the dental and vision premiums for Unclassified employees that were hired before March 1, 2007 and retire from the District with 15 years of service. The District pays \$165 per month to 5 retirees that retired before July 1, 1998.

Agencies are not required to fund these benefits in a trust. The District is funding through the CERBT OPEB trust with CalPERS. Advantages to funding through a trust include:

- Aligns the cost of providing benefits with the period in which they are earned (service with the District), rather than waiting until employees retire and then start paying benefits (pay-as-you go approach)
- Better secures benefits that have been communicated and/or promised to employees and retirees
- Anticipated lower long-term benefit cost due to higher investment earnings in the trust vs. District investments.

The Governmental Accounting Standards Board (GASB) Statement 75 requires actuarial valuations are prepared every 2 years. This report provides the June 30, 2025 plan funded status and recommendations for 2025/26, 2026/27 and 2027/28 trust contributions.

Changes Since Previous Valuation

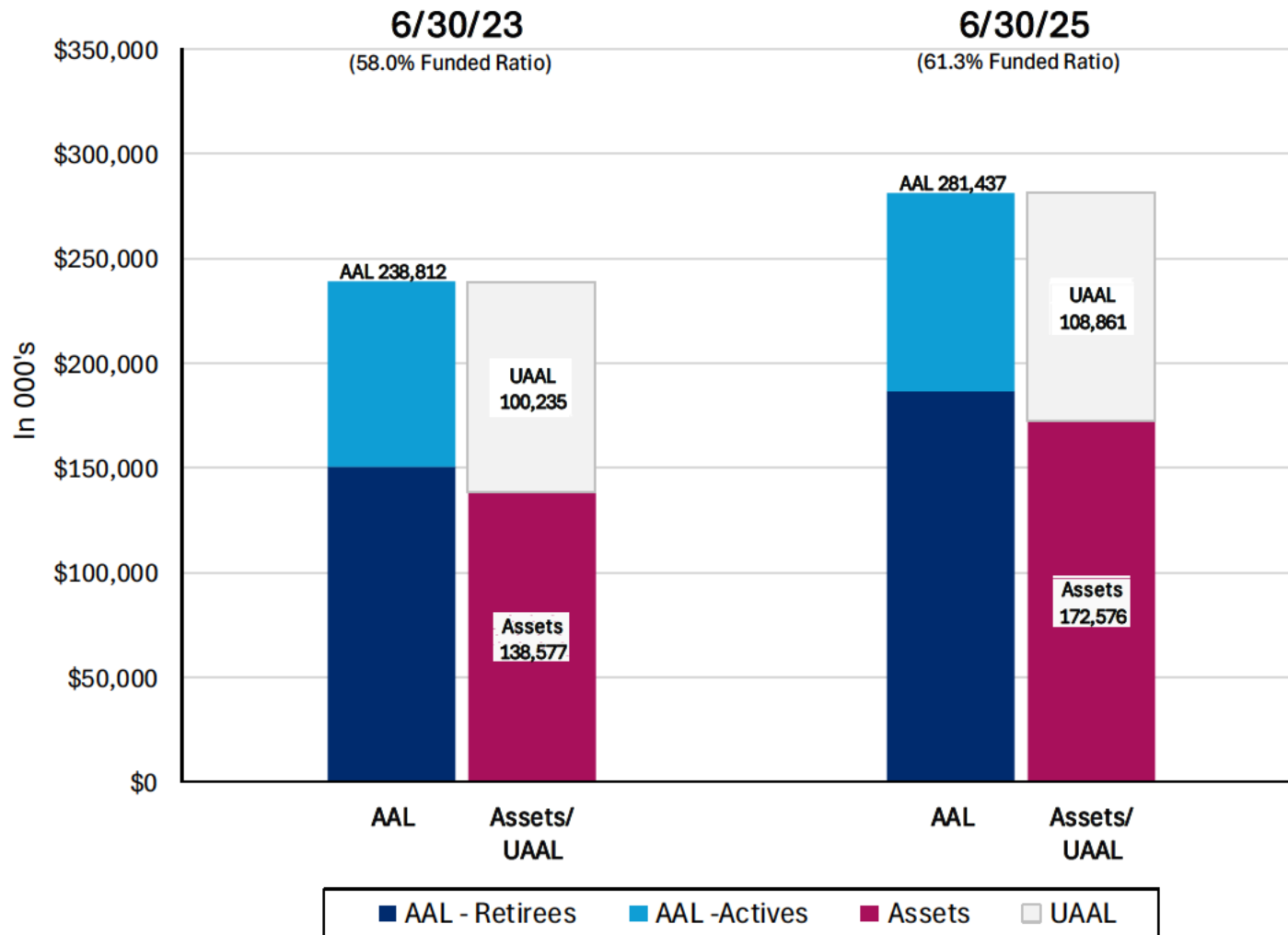
Key changes since the previous (June 30, 2023) valuation include:

- Investment returns for 2023/24 and 2024/25 of 11.0% and 12.3% exceeded the 6.0% annual assumed return.
- Significant premium increases over the last 2 years including approximate annual increases of 12% to 13% for Kaiser and 8% for the Blue Shield PPO, which outpaced the assumed 5% annual increases. Over 80% of plan participants are enrolled in these 2 plans.
- Assumption changes including a change to the discount rate from 6.0% to 6.3% to reflect a significant increase in investment advisors' future expected returns, and a change to the medical trend assumption to reflect higher expected future medical premium increases.
- Effective April 1, 2024 for hires after December 30, 2006, the self-pay contribution of 15% of the medical premium was changed to 0%.

Executive Summary (Continued)

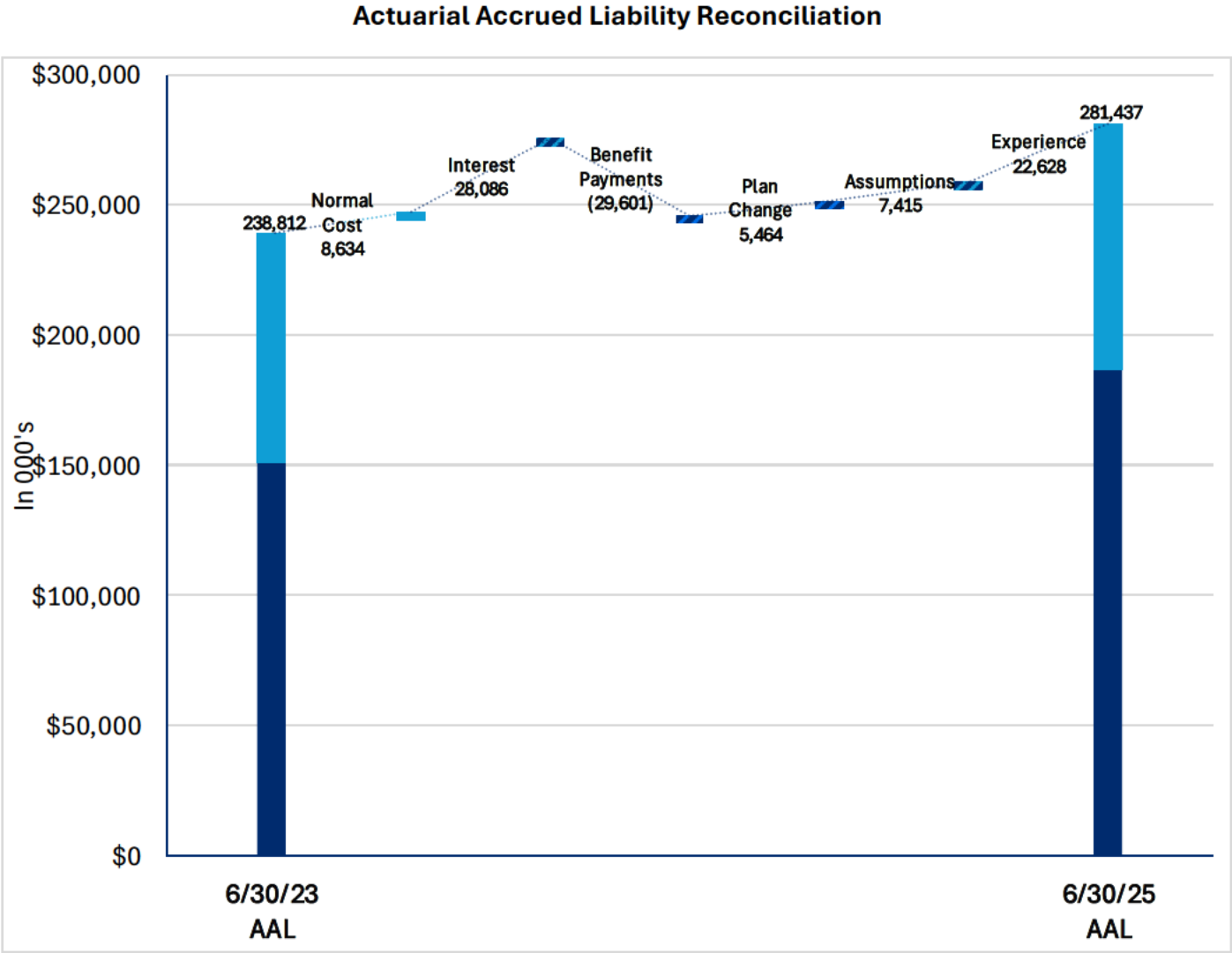
Funded Status

The Actuarial Accrued Liability (AAL) is a target asset value and represents the portion of benefits accrued or earned by participants. As of June 30, 2025, the AAL was \$281,437,000, assets \$172,576,000, with an Unfunded Actuarial Accrued Liability (UAAL) of \$108,861,000. Comparison of the June 30, 2023 and June 30, 2025 AAL, assets, and UAAL follows.



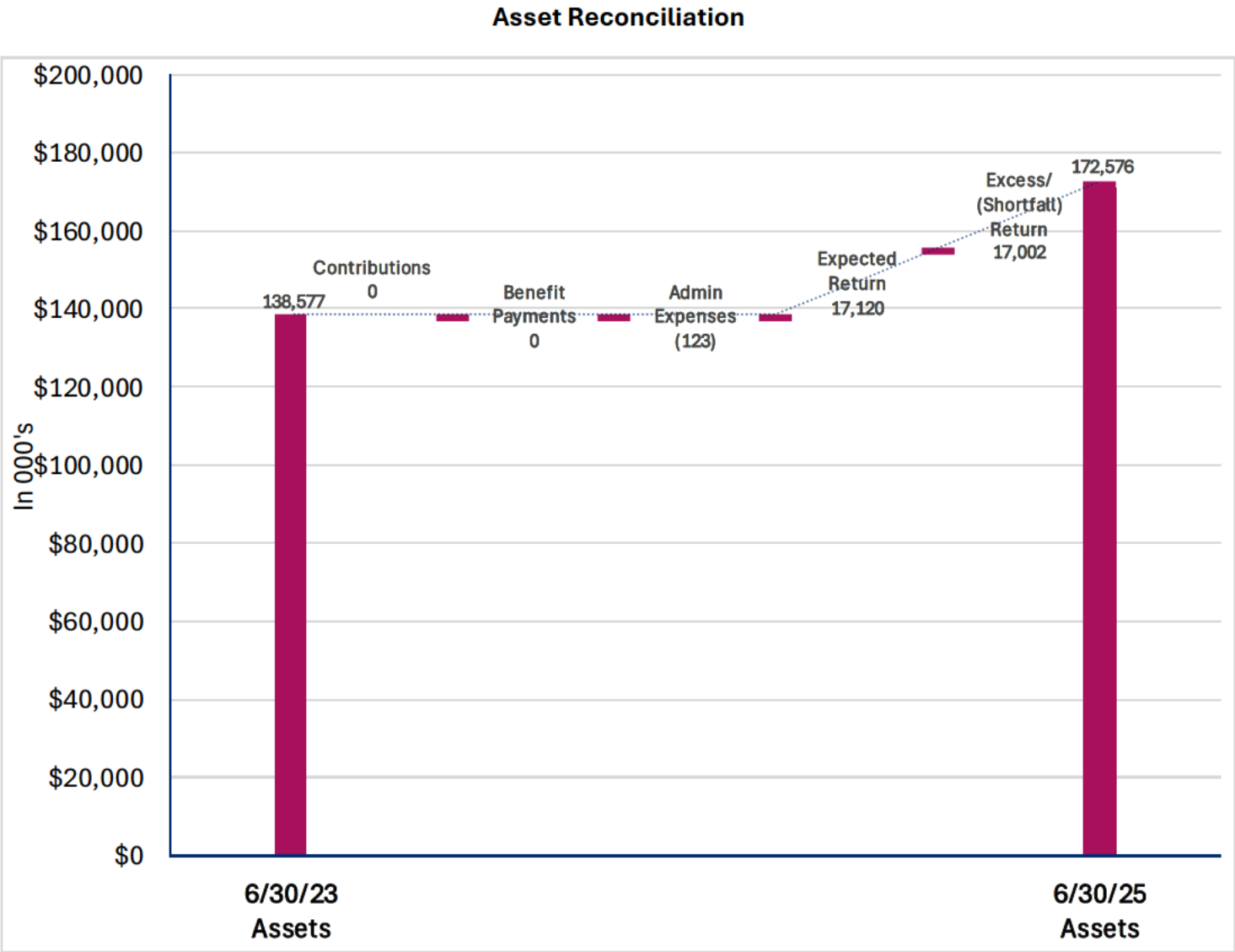
Executive Summary (Continued)

Each year the Actuarial Accrued Liability increases by Normal Cost (the value of benefits accruing for active employees) and interest, and decreases by benefits paid. For each valuation, there are potential actuarial assumption changes, plan changes, and plan experience changes. Following are changes in the Actuarial Accrued Liability from the prior valuation:



Executive Summary (Continued)

Assets increase by contributions made, decrease with any benefits and expenses paid, and increase/(decrease) with investment return. Following are the changes in assets since the prior valuation. Investment return is broken down into expected return and excess/shortfall return above/below expected:

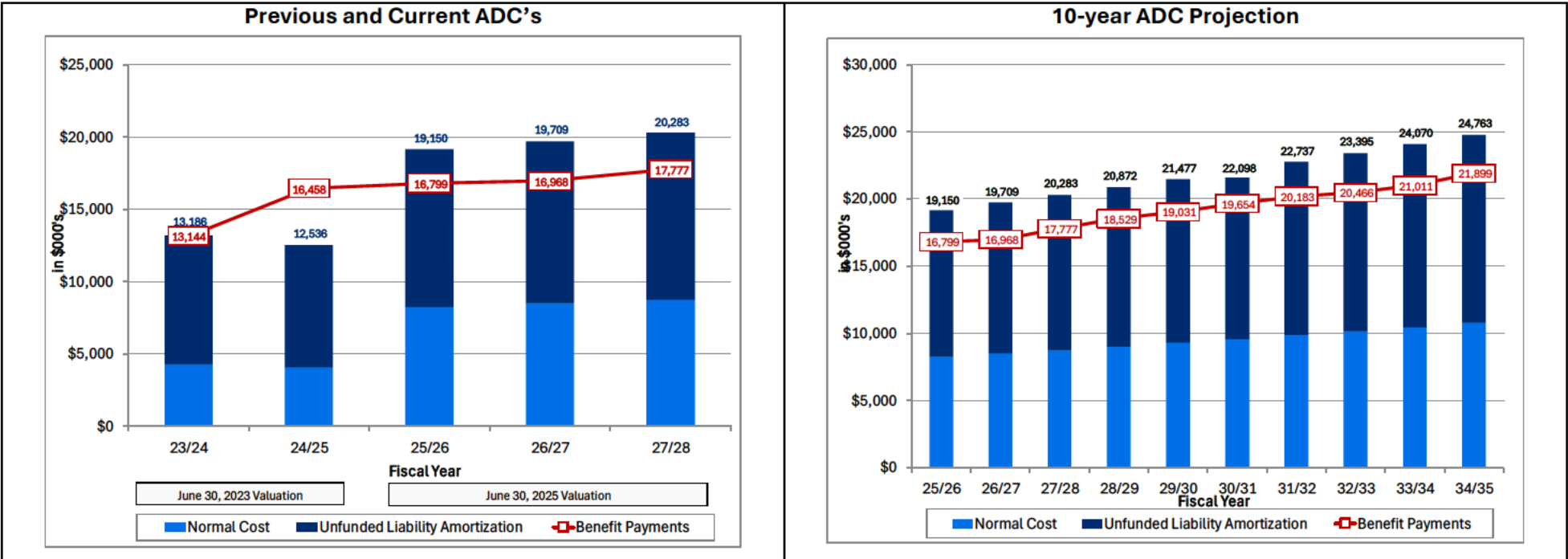


Executive Summary (Continued)

Actuarially Determined Contributions (ADC)

The Actuarially Determined Contribution is calculated as the Normal Cost (cost of benefits accruing for active employees plus administrative expenses) plus an amortization payment on the Unfunded Actuarially Accrued Liability. These components represent a payment for the ongoing cost of the plan, plus a payment to make up for any accumulated shortfall. If a plan is overfunded, the amortization payment would be a credit. The unfunded liability payment represents an approximate 12-year amortization.

Benefit payments are the portion of premiums paid by the District to current retirees. The District contributions to the trust and benefits paid to retirees (that are not reimbursed by the trust) are payments toward OPEB. As the funded status of the plan improves, eventually the benefits paid are expected to exceed the ADC, at which point trust assets will be used to pay retiree benefit payments (which is the purpose of the trust). At that point the District's OPEB cost will be reduced from an amount that exceeds benefit payments, to an amount less than benefit payments. Following are the ADC's from the previous and current valuations, along with a 10-year projection



Section I – Benefit Summary

Cash Benefits

District offers coverage in District medical plans (Kaiser, Blue Shield, and Anthem) to eligible retirees.

BENEFIT PROVISION											
Eligibility	- Retire directly from the District under CalPERS: (a) Service retirement - age 50 (52 for Miscellaneous PEPRA members) with 5 years of CalPERS service or (b) Disability retirement - Enrolled in District medical plan at time of retirement - Board members elected after January 1, 1995 are not eligible										
Medical Benefit	District contributes 100% of the medical premium and Medicare Part B premium for eligible retirees and dependents. Eligibility based on hire date and years of service: <table> <tr> <th></th><th>Retiree Only</th><th>1 Dependent</th></tr> <tr> <td>Hired < 3/1/07</td><td>10 years</td><td>15 years</td></tr> <tr> <td>Hired ≥ 3/1/07</td><td>15 years</td><td>20 years</td></tr> </table> - Minimum 5 years of District service. All CalPERS service applied after 5 years of District service - Retirees with less than 10/15 years of service may not elect coverage and self-pay - Retirees with 10/15 years of service have option to pay the premium to cover additional dependents - Disability retirement: 5 years of District service required for retiree-only coverage, 15/20 years for 1 dependent			Retiree Only	1 Dependent	Hired < 3/1/07	10 years	15 years	Hired ≥ 3/1/07	15 years	20 years
	Retiree Only	1 Dependent									
Hired < 3/1/07	10 years	15 years									
Hired ≥ 3/1/07	15 years	20 years									
Dental and Vision	Unclassified ¹ hired before March 1, 2007 with 15 years of service: District contributes 100% of the dental/vision premium for retiree and 1 dependent (vision for Blue Shield/Anthem medical coverage only, Kaiser includes vision)										
Death Benefit	Unclassified receive \$50,000 death benefit in 1 st year of retirement, decreasing each year by \$10,000 to \$0 in 5 th year										
Surviving Spouse Benefit	District contribution continues to dependents that were receiving District-paid coverage at the time of the retiree's death										
Grandfathered Benefit	District contributes \$165/month for 5 retirees/surviving spouses with retirements before July 1, 1988										
Plan Changes Since Prior Valuation	Effective April 1, 2024 for hires after December 30, 2006, the self-pay contribution of 15% of the medical premium was changed to 0%										

¹ Unclassified includes the CEO, General Counsel, Board Clerk, and any other employees designated unclassified by the CEO.

Section I – Benefit Summary (Continued)

Implicit Subsidy Benefits

Actuarial Standards of Practice No. 6 generally requires age-specific costs to be included in actuarial valuations. The implicit subsidy is the amount by which the retiree age-specific cost exceeds the premium. This is typically seen in plans where active employees and pre-Medicare retirees have the same premiums.

District premiums are determined separately for actives and pre-Medicare retirees. We understand the intent of this premium structure is to have the retiree premiums reflect the higher (than actives) age-specific costs. Our modeling calculated a very small (less than 1%) aggregate excess of retiree premiums over the age-specific costs. This is well within a reasonable range, and therefore we are not including an implicit subsidy (which would have been a negative subsidy, or credit) in this valuation.

The premium structure was set a number of years ago, with active and retiree premiums increased by the same percentages subsequently. We recommend the District review this rate structure in the near future, and then periodically update.

Section I – Benefit Summary (Continued)

Monthly Medical Premiums

Actives						
Plan	Effective 4/1/2025			Effective 1/1/2026		
	Single	2-Party	Family	Single	2-Party	Family
Blue Shield HMO Access+	\$ 1,048.03	\$ 2,515.26	\$ 2,934.36	\$ 1,144.23	\$ 2,746.13	\$ 3,203.70
Blue Shield HMO Trio	930.89	2,234.15	2,606.41	1,016.33	2,439.22	2,845.65
Blue Shield PPO	1,367.86	3,282.91	3,829.96	1,425.32	3,420.82	3,990.85
Kaiser	942.33	2,261.59	2,638.52	907.75	2,178.59	2,541.69

Retirees Non-Medicare						
Plan	Effective 4/1/2025			Effective 1/1/2026		
	Single	2-Party	Family	Single	2-Party	Family
Blue Shield HMO Access+	\$ 1,465.48	\$ 3,517.08	\$ 4,103.27	\$ 1,599.99	\$ 3,839.91	\$ 4,479.90
Blue Shield HMO Trio	1,301.69	3,124.01	3,644.67	1,421.17	3,410.76	3,979.21
Blue Shield PPO	2,620.77	6,289.79	7,338.14	2,730.87	6,554.02	7,646.41
Kaiser	1,146.65	2,751.97	3,210.63	1,104.58	2,650.98	3,092.82

Retirees Medicare						
Plan	Effective 4/1/2025			Effective 1/1/2026		
	Single	2-Party	Family	Single	2-Party	Family
Anthem PPO Medicare Advantage	\$ 386.35	\$ 772.70	n/a	\$ 418.05	\$ 836.10	n/a
Blue Shield PPO Medicare Supplement	791.94	1,583.86	n/a	825.21	1,650.39	n/a
Kaiser Senior Advantage	353.47	708.02	n/a	378.11	757.26	n/a
Kaiser 65+ Non-Senior Advantage	1,570.20	3,141.48	n/a	1,104.58	2,650.98	n/a

Section I – Benefit Summary (Continued)

Medical Premium Increases

Recent premium increases are as follows:

Retiree Medical Premium Increases		
Plan	4/1/23 to 1/1/26 Annualized Increase	
	Basic	Medicare
Blue Shield HMO Access+	10%	n/a
Blue Shield HMO Trio	10%	n/a
Blue Shield PPO/Medicare Supplement	8%	8%
Blue Shield PPO MA/Anthem PPO MA	n/a	-7%
Kaiser/Senior Advantage	13%	12%
Kaiser 65+ Non Senior Advantage	n/a	-8%

Section I – Benefit Summary (Continued)

Monthly Dental and Vision Premiums

Plan	Effective 4/1/2025			Effective 1/1/2026		
	Single	2-Party	Family	Single	2-Party	Family
Delta Dental	\$ 60.80	\$ 121.20	\$ 208.60	\$ 62.20	\$ 123.90	\$ 213.20
VSP	13.50	34.90	34.90	13.50	34.90	34.90

Section II – Participant Data

The following table compares data used in the June 30, 2025 actuarial valuation with previous valuation.

	June 30, 2023	June 30, 2025
Actives		
Counts		
Classified	813	807
Unclassified	<u>36</u>	<u>38</u>
Total	849	845
Average		
Age	45.4	45.3
District Service	9.3	9.4
CalPERS Service	11.1	11.5
Pay (6/30/25 based annual pay rate)	\$ 153,200	\$ 169,500
Retirees		
Count	657	708
Average		
Age	70.2	70.9
Service Retirement Age	59.1	59.2

Section II – Participant Data (Continued)

Participant medical plans and coverage (single, 2-party, and family coverage) in the June 30, 2025 actuarial valuation are as follows:

Medical Plan	Actives					Retirees									
						Under Age 65					Over Age 65				
	Single	2-Party	Family	Total		Single	2-Party	Family	Total		Single	2-Party	Family	Total	
				Count	Percent				Count	Percent				Count	Percent
Anthem PPO Medicare	-	-	-	-	0%	-	-	-	-	0%	54	61	-	115	23%
Blue Shield HMO Access+	32	22	57	111	14%	2	6	-	8	4%	-	-	-	-	0%
Blue Shield HMO Trio	2	2	2	6	1%	-	-	-	-	0%	-	-	-	-	0%
Blue Shield PPO	68	54	100	222	27%	34	64	4	102	53%	77	94	3	174	34%
Kaiser	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%
Basic/Senior Advantage	122	109	235	466	58%	25	54	5	84	43%	87	118	1	206	40%
Non-Senior Advantage	-	-	-	-	0%	-	-	-	-	0%	4	4	-	8	2%
Not Medicare Eligible	-	-	-	-	0%	-	-	-	-	0%	4	2	-	6	1%
\$165 Benefit	-	-	-	-	n/a	-	-	-	1	n/a	-	-	-	4	n/a
Waived	-	-	-	40	n/a	-	-	-	-	n/a	-	-	-	-	n/a
Total	224	187	394	845	100%	61	124	9	195	100%	226	279	4	513	100%

Section II – Participant Data (Continued)

The distribution of active age/service and retiree ages in the June 30, 2025 actuarial valuation follows.

Age Group	Actives											Retirees
	Years of Agency Service											Total
	< 1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 +	Total	
Under 25	4	3	-	-	-	-	-	-	-	-	7	-
25 - 29	4	36	5	-	-	-	-	-	-	-	45	-
30 - 34	7	65	40	7	-	-	-	-	-	-	119	-
35 - 39	11	56	54	14	1	-	-	-	-	-	136	-
40 - 44	11	37	47	18	3	1	-	-	-	-	117	1
45 - 49	3	29	41	15	7	33	7	-	-	-	135	-
50 - 54	4	25	34	7	14	29	11	1	-	-	125	16
55 - 59	3	17	17	6	4	24	5	4	-	-	80	56
60 - 64	2	9	12	5	7	13	2	1	4	-	55	122
65 - 69	-	4	4	1	3	4	3	-	-	-	19	153
70 - 74	-	-	1	-	1	3	1	-	-	-	6	128
75 - 79	-	-	-	-	-	-	-	-	-	-	-	120
80 - 84	-	-	-	-	-	-	-	1	-	-	1	66
85 and Over	-	-	-	-	-	-	-	-	-	-	-	46
Total	49	281	255	73	40	107	29	7	4	-	845	708

Section III – Plan Assets

Asset Allocation

The District prefunds benefits through the CERBT (CalPERS Employers' Retiree Benefit Trust). The CERBT provides 3 investment portfolios with the following asset allocations. The District is in Strategy 1.

	Strategy 1	Strategy 2	Strategy 3
Target Asset Allocation			
Global Equity	49%	34%	23%
Fixed Income	23%	41%	51%
Treasury Inflation-Protected Securities ("TIPS")	5%	5%	9%
Real Estate Investment Trusts ("REITs")	20%	17%	14%
Commodities	3%	3%	3%
Total	100%	100%	100%
Expected Return	6.30%	6.10%	5.80%

Section III – Plan Assets (Continued)

Asset Reconciliation

Following is the reconciliation of assets since the prior actuarial valuation (amounts in \$000's):

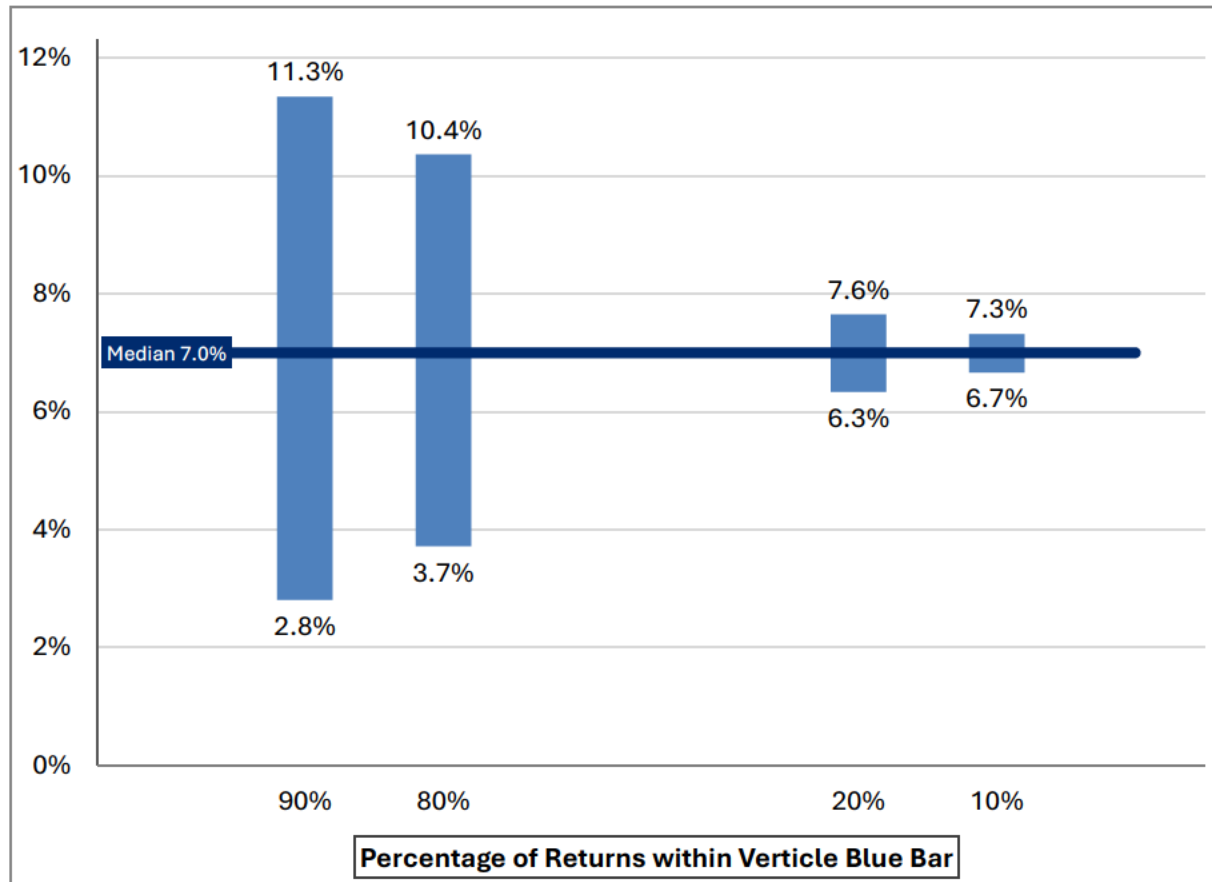
	2023/24	2024/25
Assets (Beginning of Year)	\$ 138,577	\$ 153,723
Receipts		
Contributions	-	-
Investment Income	15,268	18,973
Investment Expenses	(51)	(67)
Subtotal Receipts	15,217	18,906
Disbursements		
Benefit Payments	-	-
Administrative Expenses	(70)	(53)
Subtotal Disbursements	(70)	(53)
Assets (End of Year)	\$ 153,723	\$ 172,576
Return on Assets	11.0 %	12.3 %

Section III – Plan Assets (Continued)

Long Term Expected Return

We've developed long-term expected future investment returns using stochastic modeling. Investment return assumptions are based on the 2025 Horizon Actuarial Services LLC Capital Market assumption survey using a 20-year time perspective. It should be noted that there has been a significant increase in investment advisors' future expected returns over the last 4 years (primarily occurring in the 2022 survey).

Results of our analysis are summarized in the following chart. The median return is 7.0%. Sample return ranges are also provided with the blue vertical bars. For example, the model projects that 90% average 20-year returns will be between 2.8% and 11.3%; 10% will be between 6.7% and 7.3%.



Section III – Plan Assets (Continued)

Discount Rate

The discount rate represents a long-term expectation of the return on plan assets. If future investment returns are equal to the discount rate selected (and all other assumptions are met), then funds contributed to the trust over time will accumulate to the amounts necessary to pay plan benefits.

The median return is the return that the model expects will be in the middle of all future returns, i.e. half of observed returns will be above the median, and half below. So selecting a discount rate based on the 7.0% median return means there is a 50% likelihood future returns will fall below this assumption. We recommend some consideration be given to likely ranges of future returns. For example, as illustrated in the chart, 90% of future returns will be in the range 2.8% to 11.3%. While selecting a discount rate on the lower end (at 2.8%) would dramatically increase the likelihood of achieving the assumed return, we think it is overly conservative, likely not feasible for budgeting contributions, and results in significant future gains which ultimately would frontload plan contributions. As we look to the right-hand side of the chart the 20% and 10% ranges provide some level of assurance the assumption will be met without these drawbacks. Based on this, we would recommend a 6.3% discount rate, which represents the 60%¹ confidence level return (i.e. the return is expected to be achieved over the long term 60% of the time).

¹ The 20% chart entry has 40% of expected returns below the bar, 20% within the bar, and 40% above the bar. This means that a 6.3% discount rate will result in returns exceeding the assumption 60% (1 – 40%) of the time.

Section IV – Funded Status

Current and Previous Valuation

The Present Value of Projected Benefits (PVPB) represents the amount that, if set aside in a trust, would be sufficient to pay all benefits to current participants if all actuarial assumptions are met. The Actuarial Accrued Liability (AAL) is a target asset value and represents the portion of benefits accrued or earned by participants. Since the AAL is a target asset value, the funded status is measured by comparing assets to the AAL. The difference between the AAL and assets is known as the Unfunded Accrued Liability. Assets are measured at Market Value. Following is the plan funded status for the previous and current valuations (amounts in \$000's):

	June 30, 2023	June 30, 2025	Change
Present Value of Projected Benefits			
Actives	\$ 134,700	\$ 178,299	\$ 43,599
Retirees	<u>150,850</u>	<u>186,740</u>	<u>35,890</u>
Total	285,551	365,038	79,487
Actuarial Accrued Liability (AAL)			
Actives	87,962	94,697	6,735
Retirees	<u>150,850</u>	<u>186,740</u>	<u>35,889</u>
Total	238,812	281,437	42,625
Plan Assets			
Market Value of Assets	138,577	172,576	33,999
Funded Status			
Unfunded Liability	\$ 100,235	\$ 108,861	\$ 8,626
Funded Ratio (Assets/AAL)	58.0%	61.3%	3.3%

Section V – Recommended Contributions and Projections

Actuarially Determined Contributions (ADC)

The Actuarially Determined Contribution is calculated as the Normal Cost (cost of benefits accruing for active employees, plus administrative expenses) plus an amortization of the Unfunded Actuarially Accrued Liability. These components represent a payment for the ongoing cost of the plan, plus a payment to make up for any accumulated shortfall. If a plan is overfunded, the amortization amount would be a credit. The unfunded liability payment is approximately equal to a 12-year amortization payment.

Following are ADC's for the 3 years covered under this valuation (amounts in \$000's):

	FY 25/26	FY 26/27	FY 27/28
Actuarially Determined Contribution (ADC)			
Normal Cost	\$ 8,237	\$ 8,490	\$ 8,750
Unfunded Liability Payment	10,913	11,219	11,533
ADC	19,150	19,709	20,283
Projected Payroll	\$ 143,239	\$ 147,249	\$ 151,372
Actuarially Determined Contribution (ADC)			
Normal Cost	5.8%	5.8%	5.8%
Unfunded Liability Payment	7.6%	7.6%	7.6%
ADC	13.4%	13.4%	13.4%

Trust Contributions

The ADC is the amount that should be contributed to the trust if all benefits (and related administrative expenses) are paid from the trust. However, benefits are paid monthly by the agency to retirees outside of the trust. These benefit payments represent a portion of the ADC that is paid. Typically, agencies look to the ADC to determine the trust contribution. Under this approach there are 2 methods:

- Method 1: Contribute the ADC to the trust and get reimbursed from the trust for all benefit payments (and related administrative expenses) made during the year. Under this method, the trust contribution covers the ADC, regardless of how much in benefit payments are made from the trust.
- Method 2: Determine the initial trust contribution as the ADC less *expected* benefits (and associated administrative expenses) to be paid. Under this method, to pay exactly the ADC in a given year, a true-up/down should be made at the end of the year so that total contributions (ADC less expected benefit payments, plus actual benefit payments and expenses) is equal to the ADC.

Section V – Recommended Contributions and Projections (Continued)

The following table provides the details under these 2 methods for the 3 ADC years provided in this valuation (amounts in \$000's):

	FY 25/26	FY 26/27	FY 27/28
Expected Payments			
Cash Benefit Payments	\$ 16,799	\$ 16,968	\$ 17,777
Admin Expenses	0	0	0
Total	16,799	16,968	17,777
Trust Contribution			
Method 1			
(Cash Benefits Paid by the Trust)			
Trust Contribution/ADC	19,150	19,709	20,283
Method 2			
(No Benefits Paid from Trust)			
ADC	19,150	19,709	20,283
Expected Cash Benefits Payments (including administrative expenses)	(16,799)	(16,968)	(17,777)
Estimated Trust Contribution/(Reimbursement)	2,351	2,741	2,506
Net District Cash Payments	\$ 19,150	\$ 19,709	\$ 20,283
(Estimated Trust Contribution + Cash Benefit/Admin Payments)			

Section V – Recommended Contributions and Projections (Continued)

Amortization Bases

The amortization of the unfunded liability is based on a multilevel approach. This means in each valuation the remaining scheduled payments from the previous valuation are maintained, with additional layer(s) added so that the unfunded liability determined in the new valuation is scheduled to be paid off. Following is the schedule of amortization bases (balances and payments/credits are in '000s):

Base	Amortization Period				7/1/25 Balance	Payment/Credit		
	Date Established	Escalator	Ramp Up	Remaining Period		25/26	26/27	27/28
Initial UAAL	6/30/23	2.80%	None	12	\$ 93,431	\$ 9,586	\$ 9,855	\$ 10,131
Investment (Gain)/Loss	6/30/25	2.80%	None	15	(17,002)	(1,462)	(1,503)	(1,545)
Plan Change	6/30/25	2.80%	None	15	5,464	470	483	497
Assumptions	6/30/25	2.80%	None	15	7,415	638	655	674
Experience G/L	6/30/25	2.80%	None	15	19,553	1,681	1,728	1,777
Totals				Avg: 12.3	\$ 108,861	\$ 10,913	\$ 11,219	\$ 11,533

Notes:

- ▶ Unfunded liability changes established under this June 30, 2025 valuation are amortized over 15 years.
- ▶ All amortizations are as level percentage of aggregate projected payroll.

Section V – Recommended Contributions and Projections (Continued)

Contribution Projections – Full ADC Funding

Projected benefit payments, contributions, and unfunded liability are as follows assuming the District contributes the full ADC each year (amounts in \$000's):

Year	District Contributions			Unfunded AAL - Beginning of Year		
	Benefit Payments	Trust Contribution/ (Withdrawal)	Total Contribution	Actuarial Accrued Liability	Assets	Unfunded AAL
2025/26	\$ 16,799	\$ 2,351	\$ 19,150	\$ 281,437	\$ 172,576	\$ 108,861
2026/27	16,968	2,741	19,709	290,279	185,812	104,467
2027/28	17,777	2,506	20,283	299,761	200,279	99,482
2028/29	18,529	2,343	20,872	309,269	215,410	93,859
2029/30	19,031	2,446	21,477	318,869	231,321	87,549
2030/31	19,654	2,444	22,098	328,833	248,334	80,499
2031/32	20,183	2,554	22,737	339,064	266,411	72,653
2032/33	20,466	2,929	23,395	349,685	285,734	63,951
2033/34	21,011	3,059	24,070	360,983	306,654	54,329
2034/35	21,899	2,864	24,763	372,737	329,019	43,718
2035/36	22,474	3,000	25,474	384,631	352,584	32,047
2036/37	22,836	3,368	26,203	397,001	377,765	19,235
2037/38	23,670	(10,070)	13,600	410,105	404,903	5,202
2038/39	24,417	(10,426)	13,991	423,512	419,887	3,624
2039/40	25,420	(11,028)	14,392	437,337	435,443	1,894
2040/41	26,329	(13,534)	12,795	451,352	451,352	-
2041/42	27,311	(14,152)	13,159	465,674	465,674	-
2042/43	28,434	(14,901)	13,533	480,256	480,256	-
2043/44	29,336	(15,420)	13,916	494,980	494,980	-
2044/45	30,661	(16,352)	14,309	510,090	510,090	-

Section V – Recommended Contributions and Projections (Continued)

Contribution Projections – Full ADC Funding, no withdrawal until UAL is paid off

Projected benefit payments, contributions, and unfunded liability are as follows assuming the District contributes the full ADC each year but does not request reimbursements until the UAL is paid off (amounts in \$000's):

Year	District Contributions			Unfunded AAL - Beginning of Year		
	Benefit Payments	Trust Contribution/ (Withdrawal)	Total Contribution	Actuarial Accrued Liability	Assets	Unfunded AAL
2025/26	\$ 16,799	\$ 2,351	\$ 19,150	\$ 281,437	\$ 172,576	\$ 108,861
2026/27	16,968	2,741	19,709	290,279	185,812	104,467
2027/28	17,777	2,506	20,283	299,761	200,279	99,482
2028/29	18,529	2,343	20,872	309,269	215,410	93,859
2029/30	19,031	2,446	21,477	318,869	231,321	87,549
2030/31	19,654	2,444	22,098	328,833	248,334	80,499
2031/32	20,183	2,554	22,737	339,064	266,411	72,653
2032/33	20,466	2,929	23,395	349,685	285,734	63,951
2033/34	21,011	3,059	24,070	360,983	306,654	54,329
2034/35	21,899	2,864	24,763	372,737	329,019	43,718
2035/36	22,474	3,000	25,474	384,631	352,584	32,047
2036/37	22,836	3,368	26,203	397,001	377,765	19,235
2037/38	23,670	(6,554)	17,116	410,105	404,903	5,202
2038/39	24,417	(12,326)	12,092	423,512	423,512	-
2039/40	25,420	(12,981)	12,439	437,337	437,337	-
2040/41	26,329	(13,534)	12,795	451,352	451,352	-
2041/42	27,311	(14,152)	13,159	465,674	465,674	-
2042/43	28,434	(14,901)	13,533	480,256	480,256	-
2043/44	29,336	(15,420)	13,916	494,980	494,980	-
2044/45	30,661	(16,352)	14,309	510,090	510,090	-

Section V – Recommended Contributions and Projections (Continued)

Contribution Projections – No Trust Contributions/Withdrawals Until 100% Funded

Projected benefit payments, contributions, and unfunded liability are as follows assuming the District pays benefit payments outside of the trust and makes no trust withdrawals until the plan is fully funded. Thereafter the ADC is contributed each year (amounts in \$000's):

Year	District Contributions			Unfunded AAL - Beginning of Year		
	Benefit Payments	Trust Contribution/ (Withdrawal)	Total Contribution	Actuarial Accrued Liability	Assets	Unfunded AAL
2025/26	\$ 16,799	\$ -	\$ 16,799	\$ 281,437	\$ 172,576	\$ 108,861
2026/27	16,968	-	16,968	290,279	183,388	106,892
2027/28	17,777	-	17,777	299,761	194,876	104,885
2028/29	18,529	-	18,529	309,269	207,085	102,184
2029/30	19,031	-	19,031	318,869	220,058	98,812
2030/31	19,654	-	19,654	328,833	233,844	94,989
2031/32	20,183	-	20,183	339,064	248,493	90,571
2032/33	20,466	-	20,466	349,685	264,061	85,624
2033/34	21,011	-	21,011	360,983	280,603	80,380
2034/35	21,899	-	21,899	372,737	298,182	74,555
2035/36	22,474	-	22,474	384,631	316,863	67,768
2036/37	22,836	-	22,836	397,001	336,713	60,288
2037/38	23,670	-	23,670	410,105	357,807	52,298
2038/39	24,417	-	24,417	423,512	380,223	43,289
2039/40	25,420	-	25,420	437,337	404,042	33,294
2040/41	26,329	-	26,329	451,352	429,354	21,997
2041/42	27,311	(4,258)	23,053	465,674	456,252	9,422
2042/43	28,434	(14,901)	13,533	480,256	480,256	-
2043/44	29,336	(15,420)	13,916	494,980	494,980	-
2044/45	30,661	(16,352)	14,309	510,090	510,090	-

Section V – Recommended Contributions and Projections (Continued)

Unfunded Liability Projections

The following illustrates the projected unfunded actuarial accrued liability under various funding scenarios assuming the District continues to pay all benefit payments outside of the trust (amounts in \$000's):

Year	Unfunded AAL (Beginning of Year)						
	With No Further CERBT Deposits	CERBT Deposits of \$1M in Each of Next Six Years	CERBT Deposits of \$2M in Each of Next Six Years	CERBT Deposits of \$3M in Each of Next Six Years	CERBT Deposits of \$4M in Each of Next Six Years	CERBT Deposits of \$5M in Each of Next Six Years	CERBT Deposits of \$6M in Each of Next Six Years
2025/26	\$ 108,861	108,861	\$ 108,861	\$ 108,861	\$ 108,861	\$ 108,861	\$ 108,861
2026/27	106,892	105,861	104,830	103,799	102,768	101,737	100,706
2027/28	104,885	102,758	100,631	98,505	96,378	94,251	92,125
2028/29	102,184	98,893	95,602	92,312	89,021	85,730	82,439
2029/30	98,812	94,283	89,755	85,227	80,699	76,171	71,643
2030/31	94,989	89,146	83,303	77,461	71,618	65,775	59,932
2031/32	90,571	83,331	76,091	68,851	61,611	54,372	47,132
2032/33	85,624	77,931	70,238	62,544	54,851	47,158	39,464
2033/34	80,380	72,204	64,029	55,854	47,678	39,503	31,328
2034/35	74,555	65,867	57,180	48,493	39,805	31,118	22,430
2035/36	67,768	58,536	49,305	40,073	30,841	21,609	12,378
2036/37	60,288	50,478	40,667	30,857	21,047	11,237	1,427
2037/38	52,298	41,874	31,449	21,024	10,600	175	-
2038/39	43,289	32,211	21,134	10,056	-	-	-
2039/40	33,294	21,523	9,751	-	-	-	-
2040/41	21,997	9,488	-	-	-	-	-
2041/42	9,422	-	-	-	-	-	-
2042/43	-	-	-	-	-	-	-
2043/44	-	-	-	-	-	-	-
2044/45	-	-	-	-	-	-	-

Section VI – Actuarial Methods and Assumptions

ACTUARIAL METHODS	
Actuarial Value of Assets	Market Value of Assets in OPEB trust
Actuarial Cost Method	The level percent of payroll Entry Age Normal Cost Method was used (required method for GASB 75). For each employee, the normal cost is the annual amount from the employee's hire age to retirement age (developed as a level percentage of the employee's projected payroll) that will accumulate to the expected value of benefits at retirement. The Actuarial Accrued Liability is the accumulation, as of the valuation date, of the past normal costs. For each inactive participant, there is no normal cost, and the Actuarial Accrued is simply the present value, as of the valuation date, of all expected future payments. The total plan normal cost and accrued liability is simply the sum of all participant's respective amounts.
Unfunded/(Overfunded) Actuarial Accrued Liability	Excess of Actuarial Accrued Liability over Actuarial Value of Assets
Amortization of Unfunded/(Overfunded) Actuarial Accrued Liability	6/30/23 valuation unfunded liability amortized over 14-year fixed (closed) period from 2023/24 6/30/25 valuation unfunded liability changes amortized over 15 years Level percentage of payroll amortization
Actuarially Determined Contribution	Equal to the sum of: ▼ Normal Cost ▼ Administrative expenses ▼ Amortization payment/(credit) on unfunded/(overfunded) actuarial accrued liability

Section VI – Actuarial Methods and Assumptions (Continued)

ACTUARIAL METHODS	
Justification for Assumptions	<u>Economic</u> Discount rate based on Capital Market model using Horizon Actuarial 2025 Survey Medical trend based on Society of Actuaries Getzen Model <u>Demographic</u> CalPERS 2000-2023 Experience Study. Assumptions are reviewed to ensure they are reasonable and represent the long-term expectations for the Plan. Past experience and anticipated future experience based on industry-specific knowledge and professional judgment are used to verify the reasonability of each of these assumptions. Participation and medical plan elections based on Plan experience.

Section VI – Actuarial Methods and Assumptions (Continued)

ACTUARIAL ASSUMPTION	6/30/23 Valuation	6/30/25 Valuation																																																																					
Discount Rate	6.00%	6.30%																																																																					
Inflation	2.50%	Same																																																																					
Funding Policy	Pre-fund through CERBT Strategy 1. No contributions or disbursements in recent years. Benefit payments paid outside of trust.	Same																																																																					
Medical Trend	<table><tr><th></th><th>All Plans</th></tr><tr><td>2025</td><td>5.00%</td></tr><tr><td>2026</td><td>4.75%</td></tr><tr><td>2027</td><td>4.50%</td></tr><tr><td>2028</td><td>4.25%</td></tr><tr><td>2029+</td><td>4.00%</td></tr></table>		All Plans	2025	5.00%	2026	4.75%	2027	4.50%	2028	4.25%	2029+	4.00%	Based on Society of Actuaries Getzen model: <table><tr><th></th><th>Non-Medicare</th><th>Medicare</th></tr><tr><td>2027</td><td>7.50%</td><td>5.80%</td></tr><tr><td>2028</td><td>7.00%</td><td>5.61%</td></tr><tr><td>2029</td><td>6.58%</td><td>5.41%</td></tr><tr><td>2030</td><td>6.15%</td><td>5.22%</td></tr><tr><td>:</td><td>:</td><td>:</td></tr><tr><td>2034</td><td>4.46%</td><td>4.44%</td></tr><tr><td>2035</td><td>4.24%</td><td>4.24%</td></tr><tr><td>2036</td><td>4.23%</td><td>4.23%</td></tr><tr><td>2037</td><td>4.21%</td><td>4.21%</td></tr><tr><td>:</td><td>:</td><td>:</td></tr><tr><td>2065</td><td>4.00%</td><td>4.00%</td></tr><tr><td>2066</td><td>3.95%</td><td>3.95%</td></tr><tr><td>2067</td><td>3.90%</td><td>3.90%</td></tr><tr><td>:</td><td>:</td><td>:</td></tr><tr><td>2072</td><td>3.66%</td><td>3.66%</td></tr><tr><td>2073</td><td>3.62%</td><td>3.62%</td></tr><tr><td>2074</td><td>3.57%</td><td>3.57%</td></tr><tr><td>2075+</td><td>3.53%</td><td>3.53%</td></tr></table>		Non-Medicare	Medicare	2027	7.50%	5.80%	2028	7.00%	5.61%	2029	6.58%	5.41%	2030	6.15%	5.22%	:	:	:	2034	4.46%	4.44%	2035	4.24%	4.24%	2036	4.23%	4.23%	2037	4.21%	4.21%	:	:	:	2065	4.00%	4.00%	2066	3.95%	3.95%	2067	3.90%	3.90%	:	:	:	2072	3.66%	3.66%	2073	3.62%	3.62%	2074	3.57%	3.57%	2075+	3.53%	3.53%
	All Plans																																																																						
2025	5.00%																																																																						
2026	4.75%																																																																						
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2029+	4.00%																																																																						
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2034	4.46%	4.44%																																																																					
2035	4.24%	4.24%																																																																					
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2065	4.00%	4.00%																																																																					
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2072	3.66%	3.66%																																																																					
2073	3.62%	3.62%																																																																					
2074	3.57%	3.57%																																																																					
2075+	3.53%	3.53%																																																																					
Pay Increases	Individual: CalPERS 2000-2019 Experience Study Merit Increases Aggregate: 2.80%	Individual: CalPERS 2000-2023 Experience Study Merit Increases Aggregate: 2.80%																																																																					
Dental & Vision Increases	3.00%	Same																																																																					

Section VI – Actuarial Methods and Assumptions (Continued)

ACTUARIAL ASSUMPTION	6/30/23 Valuation			6/30/25 Valuation																																
Fixed \$165 Subsidy	No future increases			Same																																
Mortality/Turnover/ Disability/Retirement	CalPERS 2000-2019 Experience Study Pension tier estimated based on CalPERS service			CalPERS 2000-2023 Experience Study Pension tier estimated based on CalPERS service																																
Mortality Improvement	80% Society of Actuaries MP-2020			Society of Actuaries MP-2021																																
Participation at Retirement	100%			95%																																
Spouse Coverage at Retirement	Males: 70% cover a spouse Females: 50% cover a spouse			65%																																
Surviving Spouse Participation	100% if eligible for District contribution			Same																																
Medical Plan at Retirement	<table><tr><th></th><th>Non-Medicare</th><th>Medicare</th></tr><tr><td>Kaiser</td><td>45%</td><td>45%</td></tr><tr><td>Blue Shield HMO</td><td>0%</td><td>n/a</td></tr><tr><td>Blue Shield PPO</td><td>55%</td><td>27.5% Med. Supp. 27.5% Med. Adv.</td></tr></table>				Non-Medicare	Medicare	Kaiser	45%	45%	Blue Shield HMO	0%	n/a	Blue Shield PPO	55%	27.5% Med. Supp. 27.5% Med. Adv.	<table><tr><td colspan="3">Actives:</td></tr><tr><th></th><th>Non-Medicare</th><th>Medicare</th></tr><tr><td>Kaiser</td><td>45%</td><td>45%</td></tr><tr><td>Blue Shield HMO</td><td>0%</td><td>n/a</td></tr><tr><td>Blue Shield PPO</td><td>55%</td><td>27.5%</td></tr><tr><td>Anthem MA</td><td>n/a</td><td>27.5%</td></tr></table> Current retirees: Based on current medical plan. For Blue Shield participants under age 65, assume 50% elect Blue Shield Medicare Supplement plan and 50% elect Anthem Medicare Advantage plan at age 65.			Actives:				Non-Medicare	Medicare	Kaiser	45%	45%	Blue Shield HMO	0%	n/a	Blue Shield PPO	55%	27.5%	Anthem MA	n/a	27.5%
	Non-Medicare	Medicare																																		
Kaiser	45%	45%																																		
Blue Shield HMO	0%	n/a																																		
Blue Shield PPO	55%	27.5% Med. Supp. 27.5% Med. Adv.																																		
Actives:																																				
	Non-Medicare	Medicare																																		
Kaiser	45%	45%																																		
Blue Shield HMO	0%	n/a																																		
Blue Shield PPO	55%	27.5%																																		
Anthem MA	n/a	27.5%																																		
Waived Retiree Re-Elections	None, must be enrolled in District medical plan at time of retirement			Same																																
Implicit Subsidy	Based on District demographic data and national manual ratings			Not included																																
CERBT Administrative Fees	Not included			0.03% of assets (actual fees paid by the District)																																
Spouse Age	Actives: male employees 3 years older than spouse, female employees 2 years younger than spouse Retirees: actual spouse birth date			Actives: males 3 years older than females Retirees: actual spouse birth date																																
Medicare Eligibility	Actual Medicare status for current retirees over age 65 100% for all others			Same																																

Section VII – Actuarial Certification

Rael & Letson has prepared this report for the Santa Clara Valley Water District to provide information regarding funding for the Retiree Medical Plan (“Plan”). This report should not be relied upon for any other purpose than as stated herein. The report has been prepared as of June 30, 2025 to provide the following:

- ▀ June 30, 2025 Actuarial Liabilities and Plan Funded Status
- ▀ 2025/26, 2026/27, and 2027/28 Actuarially Determined Contributions

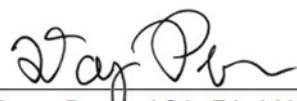
We have relied on plan provisions, participant data, and assets provided by the District. We reviewed this information for reasonableness and consistency but have not audited it. We have no reason to doubt the information provided to us is appropriate for this report, but we are not responsible for its accuracy. We are not aware of any events subsequent to this data collection that would materially effect the findings presented in this report.

We have also relied on third-party actuarial valuation software to generate this report. We reviewed sample life calculations and have no reason to doubt the underlying valuation model, or the results being generated by that model.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as: Plan experience differing from actuarial assumptions; changes in assumptions; increases or decreases expected as part of the natural operation of the Plan; and changes in Plan provisions or applicable law. Due to the limited scope of the assignment, we did not perform an analysis of the potential ranges.

This report may only be provided to other parties in its entirety.

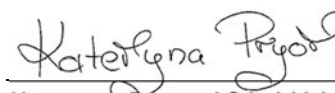
To the best of our knowledge, the information supplied in this report is complete and accurate and is in accordance with generally accepted actuarial principles and practices. We are members of the American Academy of Actuaries, and each meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



Doug Pryor, ASA, EA, MAAA
Consulting Actuary



Katherine Moore, ASA, MAAA
Consulting Actuary



Kateryna Pryor, ASA, MAAA
Actuary

Section VIII – Appendices

Appendix A - Glossary of Terms

Actuarial Accrued Liability (AAL)	Present value of benefits earned up to the valuation date, calculated using the Plan's cost method and assumptions.
Actuarial Value of Assets (AVA)	Value of the Plan's trust assets in cash, investments and other property used by the actuary for purposes of the annual valuation.
ADC	<u>A</u> ctuarially <u>D</u> etermined <u>C</u> ontribution Recommended annual contribution to OPEB trust to fund benefits.
Cash Benefit	Portion of the retiree premium paid by the agency.
Experience Gains and Losses	Differences between actual experience and expected experience based on the actuarial assumptions (i.e., for investment return, when participants are expected to retire, terminate, become disabled and die).
Implicit Subsidy Benefit	The implicit subsidy is the amount by which the retiree age-specific cost exceeds the premium.
Normal Cost	Present value of benefits expected to be earned in the coming plan year.
OPEB	<u>O</u> ther (than pension) <u>P</u> ost <u>E</u> mployment <u>B</u> enefits.
Present Value of Projected Benefits (PVPB)	Present value of all future benefits expected to be paid to participants as of the valuation date.
Unfunded Actuarial Accrued Liability (UAAL)	Amount by which the Actuarial Accrued Liability exceeds the Actuarial Value of Assets.

Rael & Letson

INCOMING BOARD CORRESPONDENCE

From: [richard.sanguini](#)
To: [Board of Directors](#); [Office of Communications](#)
Subject: Request for Inspection - Large Oak tureen Creek Bank Near 14087 Loma Rio Drive
Date: Thursday, April 16, 2026 3:31:55 PM

*** This email originated from outside of Valley Water. Do not click links or open attachments unless you recognize the sender and know the content is safe. ***

Hello,

I am writing to request an inspection of an oak tree located in the creek bank behind my property at [REDACTED], Saratoga CA.

The tree has many large branches extending towards my property (within approximately 20 feet of my residence). I am a 91 year old widower who has lived here 28+ years and concerned about potential safety risks, particularly with limb failure and damage to myself, my house structure or both. Given its Saratoga Creek bank location, I'm not sure which agency has jurisdiction.

Please let me know if the if this tree is your responsibility and whether an inspection can be scheduled? What actions do you recommend (ie pruning or removal).

Kind Regards,

Dick Sanguini [REDACTED]

Sent from iCloud

From: [Paul Statchen](#)
To: [Board of Directors](#); scc.agriculture@cep.sccgov.org; [Jim Beall](#); jfmorris@ucanr.edu
Subject: Proposal for Almaden Lake Remediation: Closed-Loop Magnetic Mercury Extraction
Date: Saturday, April 18, 2026 6:28:06 PM
Attachments: [Technical Proposal - Santa Clara Magnetic Extraction.pdf](#)

***** This email originated from outside of Valley Water. Do not click links or open attachments unless you recognize the sender and know the content is safe. *****

To the Valley Water Engineering Team,

As a researcher specializing in systems architecture and environmental reclamation, I am writing to propose a remediation strategy for the Almaden/Guadalupe watershed. While current strategies address many contaminants, there remains a critical need to target Mercury and Dioxins to fully restore the local ecosystem.

I propose a Closed-Loop Magnetic Recovery System to replace passive containment. This technical framework utilizes a three-phase approach for the selective extraction of elemental and ionic Mercury and legacy Lead-Arsenate:

- Selective Sequestration: Utilizing sulfur-functionalized polymer sponges to bind heavy metals.
- Magnetic Harvesting: Introducing ferrous-oil nanofluids to encapsulate contaminants for extraction via magnetic arrays.
- Mineralization and Stabilization: Applying cryogenic milling and plasma mineralization to convert toxins into stable Cinnabar (HgS) and Arsenopyrite (FeAsS).

This protocol provides a permanent solution for legacy heavy metal contamination without the need for traditional sediment dredging. Please find the detailed technical framework and performance specifications linked below for your review.

I look forward to your response and the opportunity to discuss how we can improve our local water quality.

Best regards,

Paul Statchen
Systems Architect | Lead Researcher

Technical Framework: Magnetic
Ferro-Extraction for Heavy Metal
Remediation
Target: Mercury (Hg) and Lead-Arsenate Legacy
Contamination
Project Overview

This technical framework describes a Closed-Loop Magnetic Recovery system designed for the remediation of the Almaden/Guadalupe watershed in Santa Clara County. The objective is the selective extraction of elemental and ionic Mercury (Hg) and legacy Lead-Arsenate from sediment and water columns without the use of chemical dispersants.

1. Selective Sequestration Phase

The capture phase utilizes Sulfur-Functionalized Polymers (e.g., Thiol-modified polyethylene).

Sulfur has a high chemical affinity for Mercury, forming strong covalent bonds. These polymers are engineered as high-surface-area "sponges" that can be deployed into contaminated zones to selectively bind Mercury and Arsenic species while ignoring non-toxic background minerals.

2. Magnetic Extraction via Ferrofluids

To facilitate the mechanical retrieval of the bound contaminants, the system introduces a Ferrous-Oil Nanofluid. This fluid consists of Superparamagnetic Iron Oxide Nanoparticles (SPIONs) suspended in a plant-based oil carrier.

- Encapsulation: The oil carrier encapsulates the contaminant-laden polymers.
- Magnetic Recovery: High-intensity magnetic arrays are used to draw the entire mass (oil + SPIONs + mercury/arsenic) out of the water column. This enables high-efficiency removal without sediment dredging.

3. Mineralization and Stabilization

The extracted concentrated waste is processed through two stages of high-energy stabilization:

- Cryogenic Milling: Contaminants are ground under liquid nitrogen to prevent the volatilization of Mercury.
- Plasma Arc Gasification (PAG): The material is subjected to temperatures exceeding 10,000°C. This process breaks the organic bonds of the plastic and oil, allowing for the controlled recombination of metals into Cinnabar (HgS) and Arsenopyrite (FeAsS).

4. Technical Performance and Scalability

Process Variable Proposed Specification

Extraction Efficiency >99% for Hg and Pb-As complexes

Byproduct State Stable, non-leachable mineral glass/crystals

Energy Recovery Net-positive synthesis gas (syngas) from organic fractions

Conclusion

This Magnetic Ferro-Extraction protocol provides an atomic-level reset for contaminated watersheds. By utilizing superparamagnetism and plasma mineralization, the system provides a

permanent solution for the legacy heavy metal debt in the Almaden valley.

Prepared By:

Paul Statchen

Systems Architecture Researcher

Technical Framework: Magnetic Ferro-Extraction for Heavy Metal Remediation

Target: Mercury (Hg) and Lead-Arsenate Legacy Contamination

Project Overview

This technical framework describes a **Closed-Loop Magnetic Recovery** system designed for the remediation of the Almaden/Guadalupe watershed in Santa Clara County. The objective is the selective extraction of elemental and ionic Mercury (Hg) and legacy Lead-Arsenate from sediment and water columns without the use of chemical dispersants.

1. Selective Sequestration Phase

The capture phase utilizes **Sulfur-Functionalized Polymers** (e.g., Thiol-modified polyethylene). Sulfur has a high chemical affinity for Mercury, forming strong covalent bonds. These polymers are engineered as high-surface-area "sponges" that can be deployed into contaminated zones to selectively bind Mercury and Arsenic species while ignoring non-toxic background minerals.

2. Magnetic Extraction via Ferrofluids

To facilitate the mechanical retrieval of the bound contaminants, the system introduces a **Ferrous-Oil Nanofluid**. This fluid consists of Superparamagnetic Iron Oxide Nanoparticles (SPIONs) suspended in a plant-based oil carrier.

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Extraction Efficiency	>99% for Hg and Pb-As complexes
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This Magnetic Ferro-Extraction protocol provides an atomic-level reset for contaminated watersheds. By utilizing superparamagnetism and plasma mineralization, the system provides a permanent solution for the legacy heavy metal debt in the Almaden valley.

Prepared By:

Paul Statchen

Systems Architecture Researcher

OUTGOING BOARD CORRESPONDENCE

From: [Candice Kwok-Smith](#)
To: [Board of Directors](#)
Subject: FW: Info on Valley Water Groundwater Production Charges
Date: Tuesday, April 21, 2026 8:46:35 AM
Attachments: [image001.png](#)

From: Candice Kwok-Smith **On Behalf Of** Board of Directors
Sent: Tuesday, April 21, 2026 8:45 AM
To: [REDACTED]
Subject: Info on Valley Water Groundwater Production Charges

Sent on Behalf of Director Varela:

Dear Sharon Luna,

Thank you for reaching out to Valley Water with your questions about groundwater charges and the protest process.

Groundwater production charges apply to wells located within one of Valley Water's four charge zones. These charges are adopted annually as part of the rate-setting process.

Groundwater charges *do not* have a formal protest procedure: Unlike the formal Proposition 218 protest procedure (California Constitution, Article XIII D), which applies to water utilities providing retail water service and allows for a majority protest to block rate increases, groundwater charges are governed by Proposition 26 (California Constitution, Article XIII C) and are not subject to the same formal protest process. Each year, well owners are notified of proposed rates and invited to attend a public hearing to provide input, including comments, concerns, or objections.

Raw surface water charges *do* have a formal protest procedure: Please note, though, out of an abundance of caution, Valley Water's permit-based raw surface water rate-setting process follows procedures consistent with Proposition 218.

We value input from well owners and encourage your participation in the upcoming public hearings:

1. April 22 at 7:00 p.m. in Morgan Hill at City Hall
2. April 28 at 1:00 p.m. in San José at Valley Water Headquarters

If you have any additional questions about groundwater charges or the rate-setting process, please feel free to contact Carmen Narayanan at 408-630-3041.

Sincerely,

A handwritten signature in black ink, reading "John L. Varela". The signature is written in a cursive style with a large, stylized "J" and "V".

John Varela
Director, District 1