



East Bay Regional Park District

Sworn Safety Retirement Plan

January 1, 2023 Actuarial Funding Valuation
for Calendar Year 2024 and 2025 Contributions



June 12, 2024

Sworn Safety Retirement Plan

January 1, 2023 Actuarial Funding Valuation for 2024 and 2025 Contributions

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Introduction and Summary

Introduction and Actuarial Certification

Purposes of the valuation

This report presents the results of the January 1, 2023 actuarial funding valuation for East Bay Regional Park District Sworn Safety Retirement Plan (the Plan). Its primary purposes are:

- to determine the Actuarially Determined Contribution (ADC) for 2024 and 2025, and
- to evaluate the funded status of the plan.

The valuation, measurement, and contribution dates are:

Valuation date (census)	January 1, 2023
Measurement date (assets and liabilities)	January 1, 2023
Contribution years	2024 and 2025

This report has been prepared solely for the Sworn Safety Retirement Plan and East Bay Regional Park District to summarize the Plan's actuarial funding considerations. Computations for other purposes, such as plan accounting or termination, may differ significantly from the results shown in this report.

This report may not be used for any other purpose, and VIA Actuarial Solutions is not responsible for the consequences of any unauthorized use. Its content may not be modified, incorporated into or used in other material, or otherwise provided, in whole or in part, to any other person or entity, without our permission.

Technical language

The language of this report includes a number of technical terms which have special meanings. The glossary at the end of the report is provided to enhance understanding of these terms; many of them are defined there.

Changes from the prior year

Changes to the plan provisions and actuarial assumptions reflected in this valuation are described at the end of each of those sections in this report.

Summary of valuation results

The plan's funded status increased from 81.2% to 92.1% on an actuarial value basis since the prior funding valuation. This change was primarily due to ongoing plan contributions and smoothing of investment gains and losses, partially offset by updated census data.

Introduction and Summary

Introduction and Actuarial Certification (continued)

Actuarial certification

To the best of our knowledge, this report is complete and accurate and all Plan liabilities were determined in accordance with generally accepted actuarial principles and practices. Upon receipt of the report, the District should notify us if you disagree with any information contained in the report or if you are aware of any information that would affect the results that has not been communicated to us. The report will be deemed final and acceptable unless the District immediately notifies us otherwise.

The District is responsible for selecting the funding policy, actuarial assumptions, and methods used to calculate the Actuarially Determined Contribution and other results in this report. We believe that these assumptions are reasonable estimates of future plan experience, both individually and in the aggregate.

All results in this report have been prepared based on our understanding of the District's pension funding policy and the Plan's benefit provisions. Additional contributions to the Plan may be required if actual Plan economic and demographic experience do not match actuarial assumptions, or if contributions to the Plan are less than expected.

The undersigned credentialed actuaries are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. We are available to answer questions on the material contained in the report or to provide explanations or further detail, as may be appropriate. We are not aware of any direct or material indirect financial interest or relationship that could create a conflict of interest or impair the objectivity of the work.

Respectfully submitted,



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L/D/C/R: 4/dmk/gng/mws

Introduction and Summary

Summary of Results

	<u>January 1, 2023</u>	<u>January 1, 2021</u>
A. Plan participant data		
1. Number of participants		
a. Active employees	0	0
b. Vested terminated	1	1
c. Retirees and beneficiaries	28	28
d. Total	<u>29</u>	<u>29</u>
B. Benefit liabilities		
1. Present value of projected benefits	\$ 5,398,662	\$ 5,428,590
2. Actuarial accrued liability (AAL)	5,398,662	5,428,590
3. Total normal cost	0	0
C. Value of plan assets		
1. Market value of assets (MVA)	4,645,663	5,071,800
2. Actuarial value of assets (AVA)	4,972,012	4,405,943
3. AVA as % of MVA	107.0%	86.9%
D. Funded status		
1. Unfunded AAL, on AVA basis (B.2. - C.2.)	\$ 426,650	\$ 1,022,647
2. Funded status (C.2. / B.2.)	92.1%	81.2%
3. Funded status, MVA basis (C.1. / B.2.)	86.1%	93.4%
E. Actuarially Determined Employer Contribution		
1. ADEC amount	\$ 236,244	\$ 242,065
2. Contribution years	2024	2022
1. ADEC amount	\$ 56,861	\$ 242,065
2. Contribution years	2025	2023

Introduction and Summary

Funded Status History

Actuarial Valuation Date (1/1)	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio
2011	1,969,000	4,703,000	2,734,000	41.9%
2013	2,880,000	4,867,000	1,987,000	59.2%
2015	3,161,000	5,010,000	1,849,000	63.1%
2017	3,426,000	5,815,000	2,389,000	58.9%
2019	3,764,333	5,539,991	1,775,658	67.9%
2021	4,405,943	5,428,590	1,022,647	81.2%
2023	4,972,012	5,398,662	426,650	92.1%

Introduction and Summary

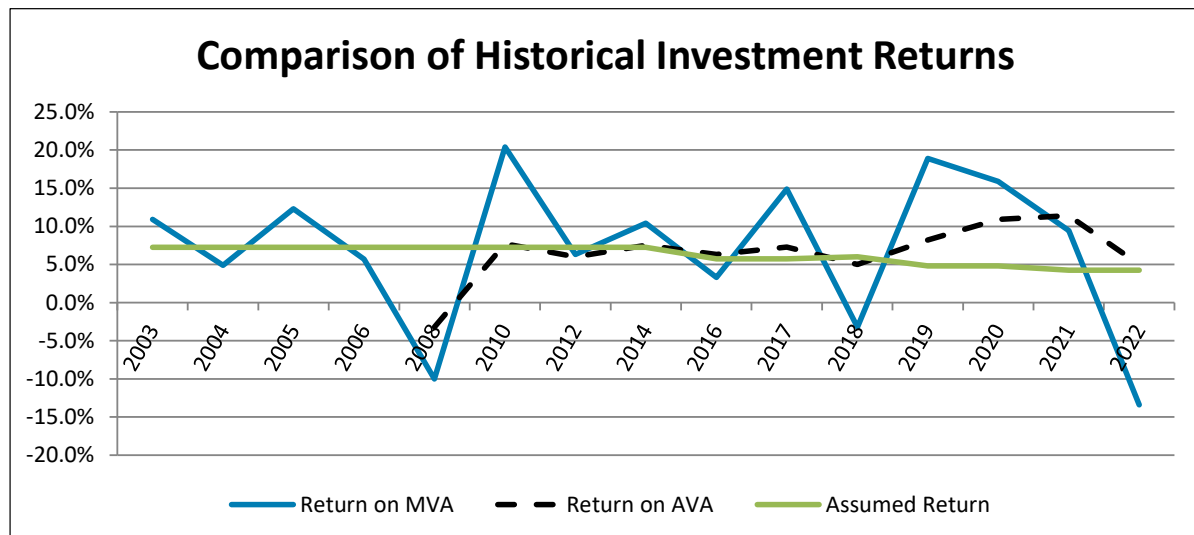
Contribution History

Actuarial Valuation Date (1/1)	Actuarially Determined Employer Contribution (ADEC)	Actual Employer Contribution	Actual Contribution as % of ADEC
2018	311,000	351,750	113.1%
2019	311,000	388,750	125.0%
2020	274,596	274,596	100.0%
2021	274,596	273,447	99.6%
2022	242,065	270,000	111.5%
2023	242,065	242,065	100.0%
2024	236,244	TBD	TBD
2025	56,861	TBD	TBD

Plan Assets

Historical Investment Return Information

<u>Year Ended December 31</u>	<u>Rate of Return on Market Value</u>	<u>Rate of Return on Actuarial Value</u>
2003	10.9%	n/a
2004	4.9%	n/a
2005	12.3%	n/a
2006	5.7%	n/a
2008	-10.0%	-3.2%
2010	20.4%	7.7%
2012	6.3%	6.0%
2014	10.4%	7.5%
2016	3.3%	6.3%
2017	14.9%	7.3%
2018	-3.2%	5.0%
2019	18.9%	8.2%
2020	15.9%	10.9%
2021	9.5%	11.4%
2022	-13.4%	5.0%



Plan Assets

Reconciliation of Market Value of Assets

	Year Ending	
	<u>December 31, 2022</u>	<u>December 30, 2021</u>
A. Market value of assets at beginning of year	\$ 5,474,913	\$ 5,071,800
B. Contributions		
1. Employer contributions during calendar year	270,000	273,447
2. Employee contributions during calendar year	0	0
3. Adjustment for receivable contributions (current plan year)	0	0
4. Adjustment for receivable contributions (prior plan year)	0	0
5. Subtotal plan year contributions	<u>270,000</u>	<u>273,447</u>
C. Investment earnings		
1. Gross investment earnings	(718,458)	491,061
2. Investment expenses	<u>(11,972)</u>	<u>(16,094)</u>
3. Net investment earnings	(730,430)	474,967
D. Benefit payments	(353,555)	(337,028)
E. Administrative expenses	(15,265)	(8,273)
F. Market value of assets at end of year (A. + B.5. + C.3. + D. + E.)	4,645,663	5,474,913
G. Investment return	-13.4%	9.5%

Plan Assets

Actuarial Value of Assets

Year Ending
December 31, 2022

A. Market value of assets	4,645,663
B. Asset (gains) and losses	
1. Year ending December 31, 2022	
a. Variance from expected return: loss or (gain)	971,889
b. Portion not yet recognized	80%
c. Investment return not yet recognized (a. x b.)	777,511
2. Year ending December 31, 2021	
a. Variance from expected return: loss or (gain)	(250,853)
b. Portion not yet recognized	60%
c. Investment return not yet recognized (a. x b.)	(150,512)
3. Year ending December 31, 2020	
a. Variance from expected return: loss or (gain)	(493,446)
b. Portion not yet recognized	40%
c. Investment return not yet recognized (a. x b.)	(197,378)
4. Year ending December 31, 2019	
a. Variance from expected return: loss or (gain)	(516,362)
b. Portion not yet recognized	20%
c. Investment return not yet recognized (a. x b.)	(103,272)
5. Year ending December 31, 2018	
a. Variance from expected return: loss or (gain)	307,157
b. Portion not yet recognized	0%
c. Investment return not yet recognized (a. x b.)	0
6. Total return not yet recognized (1.c. + 2.c. + 3.c. + 4.c. + 5.c.)	326,349
C. Preliminary actuarial value of assets (A. + B.6.)	4,972,012
D. Limiting values	
1. 80% of market value of assets	3,716,530
2. 120% of market value of assets	5,574,796
E. Actuarial value of assets (C., but not less than D.1. or more than D.2.)	4,972,012

Plan Liabilities

Summary of Liabilities Used to Determine Contributions

	<u>January 1, 2023</u>	<u>January 1, 2021</u>
A. Actuarial present value of projected benefits¹		
1. Active employees	\$ 0	\$ 0
2. Vested terminated employees	69,813	63,294
3. Retirees	2,280,640	2,214,063
4. Disabled participants	2,168,570	2,286,781
5. Beneficiaries	879,639	864,452
6. Total	<u>5,398,662</u>	<u>5,428,590</u>
B. Actuarial accrued liability²		
1. Active employees	0	0
2. Vested terminated employees	69,813	63,294
3. Retirees	2,280,640	2,214,063
4. Disabled participants	2,168,570	2,286,781
5. Beneficiaries	879,639	864,452
6. Total	<u>5,398,662</u>	<u>5,428,590</u>
C. Normal cost	0	0
D. Discount rate	4.25%	4.45%

¹ The expected value of all future benefits to be paid to the current group of members

² The cost allocated to all prior years

Funding Policy Results

Actuarial (Gain) or Loss

A. Liability (gain) or loss for the period ending on December 31, 2022

1. Actuarial accrued liability (AAL) as of January 1, 2021		\$	5,428,590
2. Expected AAL on December 31, 2022			5,229,639
3. (Gain) or loss attributable to:			
a. Plan experience different from expected	\$	197,760	
b. Changes in actuarial assumptions and methods		(28,737)	
c. Plan changes		-	
d. Total (a. + b. + c.)			\$ 169,023
4. Actual AAL on January 1, 2023			5,398,662

B. Investment (gain) or loss for the period ending on December 31, 2022

1. Actuarial value of assets on January 1, 2021	\$	4,405,943
2. Expected value of assets on December 31, 2022		4,641,935
3. Actual assets on January 1, 2023		4,972,012
4. (Gain) or loss due to investment return different from expected (2. - 3.)		(330,077)

C. Contribution (gain) or loss for the period ending December 31, 2022

1. Recommended contribution for 2021	\$	274,596
2. Recommended contribution for 2022		242,065
3. Actual contributions for 2021		273,447
4. Actual contributions for 2022		270,000
5. Contribution (gain) or loss (1. + 2. - 3. - 4.)		(26,786)

D. Changes in the unfunded AAL

1. Unfunded AAL on January 1, 2021	\$	1,022,647
2. Expected unfunded AAL on December 31, 2022 (A.2. - B.2.)		587,704
3. Changes in UAAL due to:		
a. Experience (gain) or loss (A.3.a. + B.4. - C.5.)	\$	(105,531)
b. Actuarial methods and assumptions (A.3.b.)		(28,737)
c. Plan changes (A.3.c.)		-
d. Contribution (gain) or loss (C.5.)		(26,786)
e. Total changes (a. + b. + c. + d.)		(161,054)
4. Unfunded AAL on January 1, 2023		426,650
5. Projected unfunded AAL on January 1, 2024		203,753

Funding Policy Results

Amortization Schedule

Amortization Base	Original Amount	Remaining Amortization Period at <u>1/1/2024</u>	Projected Outstanding Balance on <u>January 1, 2024</u>	Amortization Payment <u>for 2024</u>	Amortization Payment <u>for 2025</u>
2011 UAAL Base	\$ 1,718,000	1	\$ 175,689	\$ 179,384	\$ -
2013 UAAL Base	370,000	5	155,491	34,449	34,449
2015 UAAL Base	42,000	7	23,080	3,801	3,801
2017 UAAL Base	836,000	9	570,920	76,062	76,063
2019 UAAL Base	(285,519)	11	(238,595)	(27,035)	(27,035)
2021 UAAL Base ¹	(334,204)	13	(314,611)	(31,338)	(31,338)
2023 UAAL Base	(161,054)	15	<u>(168,221)</u>	<u>(15,079)</u>	<u>(15,079)</u>
Total			203,753	220,244	40,861

¹ 2021 base includes \$1,605 adjustment for transition from three-tiered interest rates to single discount rate.

Funding Policy Results

Actuarially Determined Contribution

	Contribution Year	
	<u>2024</u>	<u>2022</u>
Actuarially Determined Contribution (ADC)		
1. Total normal cost	\$ 0	\$ 0
2. Administrative expenses	16,000	6,000
3. Amortization of unfunded liability	220,244	236,065
4. ADC (1. + 2. + 3., not less than 1.)	236,244	242,065
5. Estimated employee payroll contributions	-	-
6. Net Actuarially Determined Employer Contribution (ADEC, 4. - 5.)	\$ 236,244	\$ 242,065
	<u>2025</u>	<u>2023</u>
Actuarially Determined Contribution (ADC)		
1. Total normal cost	\$ 0	\$ 0
2. Administrative expenses	16,000	6,000
3. Amortization of unfunded liability	40,861	236,065
4. ADC (1. + 2. + 3., not less than 1.)	56,861	242,065
5. Estimated employee payroll contributions	-	-
6. Net Actuarially Determined Employer Contribution (ADEC, 4. - 5.)	\$ 56,861	\$ 242,065

Valuation Data

Summary of Membership Data

	<u>January 1, 2023</u>	<u>January 1, 2021</u>
A. Active employees		
1. Number	0	0
2. Average age	N/A	N/A
3. Average years of service	N/A	N/A
B. Vested terminated		
1. Number	1	1
2. Average age	51.3	49.3
3. Average annual benefit	\$ 3,490	\$ 3,490
C. Retirees and beneficiaries		
1. Number		
a. Retired	14	14
b. Disabled	9	9
c. Beneficiaries	5	5
d. Total	<u>28</u>	<u>28</u>
2. Average age	74.0	72.0
3. Average annual benefit	\$ 12,733	\$ 11,653
D. Total number of participants (A.1. + B.1. + C.1.d.)	29	29

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January 1, 2023 Actuarial Funding Valuation for 2024 and 2025 Contributions

Valuation Data

Summary of Membership Changes

	<u>Actives</u>	<u>Vested Terminated</u>	<u>Retirees</u>	<u>Disabled</u>	<u>Beneficiaries</u>	<u>Total</u>
A. Number of members on January 1, 2021	0	1	14	9	5	29
B. Changes in membership						
1. New entrants						0
2. Retirements						0
3. Vested terminations (deferred benefits)						0
4. Termination/refund of contributions						0
5. Deaths (no beneficiary)						0
6. Deaths (with beneficiary)						0
7. Data corrections						0
8. Rehires						0
9. QDRO						0
10. Total changes	0	0	0	0	0	0
C. Number of members on January 1, 2023	0	1	14	9	5	29

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January 1, 2023 Actuarial Funding Valuation for 2024 and 2025 Contributions

Valuation Data

Age Distribution of Inactive Members

Age	Vested Terminated	Retired	Survivor	Disabled	QDRO	Total
Under 50	0	0	0	0	0	0
50 - 54	1	0	0	0	1	2
55 - 59	0	1	0	0	0	1
60 - 64	0	2	0	0	0	2
65 - 69	0	1	1	1	0	3
70 - 74	0	1	0	4	1	6
75 - 79	0	5	2	3	0	10
80 - 84	0	3	0	1	0	4
85 - 89	0	1	0	0	0	1
90 - 94	0	0	0	0	0	0
95 - 99	0	0	0	0	0	0
100 & over	0	0	0		0	0
Total	1	14	3	9	2	29

Pension Risk Information

Discussion of Pension Risks

Actuarial Standard of Practice Number 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions (ASOP 51), requires actuaries to identify and assess certain risks that may affect a plan's future financial condition. Some of the relevant risks are summarized and defined in the table below.

Risk	Identification/Definition
Investment risk	The potential that investment returns will be different than expected
Asset/liability mismatch risk	The potential that changes in asset values are not matched by changes in liability values
Longevity and other demographic risks	The potential that mortality or other demographic experience will be different than expected
Contribution risk	The potential that employer or member contribution rates are different than what is ultimately required to fund plan benefits

ASOP 51 requires that actuaries qualitatively or quantitatively assess the potential effect of these risks on the plan's future financial condition. Methods to assess the risks include scenario tests, sensitivity tests, stress tests, and calculation of actuarial liabilities using a discount rate based on minimal-risk investments. Practical considerations include the usefulness, reliability, timeliness, and cost efficiency of the risk assessment measurements.

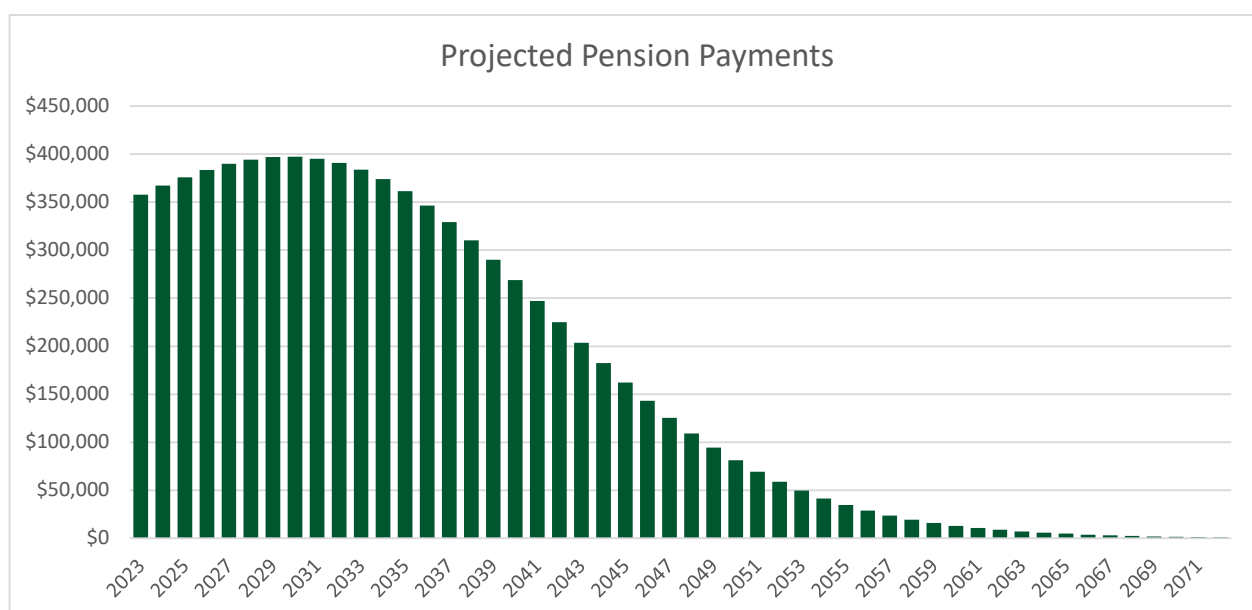
In addition to the risk assessment parameters above, ASOP 51 requires that actuaries (1) calculate various plan maturity measures and (2) disclose relevant historical information that are significant to understanding plan risks.

This report contains basic risk assessment information for the plan in accordance with ASOP 51. However, we recommend that the plan and employer consider additional pension risk analyses to better understand retirement plan volatility and the potential effect on the plan and employer. We would be glad to discuss potential additional analyses upon request.

Pension Risk Information**Plan Maturity Measures**

The Sworn Safety Retirement Plan is very mature because it has been closed to new members for many years and consists almost solely of participants receiving their pension benefits. One consequence of being a mature plan is that there are usually significant benefit outflows each year. This is natural for a mature pension plan, but care must be taken that the investment policy does not produce volatile returns when the plan is paying out significant benefits.

The table below illustrates the projected annual benefit payments over the next several decades.



Pension Risk Information

Risk Analysis

The table below provides analysis of some potential plan risks. Please note that the list of risks and the risk assessments shown below are not exhaustive. We would be glad to provide a more detailed risk assessment upon request.

Risk	Assessment
Investment risk	If future investment returns are higher or lower than assumed, then future contributions may need to be increased or decreased to compensate.
Asset/liability mismatch risk	Since plan assets are invested in a mix of equity and fixed income securities, there is a risk that changes in asset values are not matched by changes in liability values.
Longevity and other demographic risks	Although the plan demographic assumptions reflect best estimates of future plan experience, actual experience will differ from these assumptions. If participant longevity is greater than expected then this would increase plan costs.
Contribution risk	The District should continue contributing the Actuarially Determined Contribution rate and make the pension contributions a budget priority.

Pension Risk Information

Discussion of Pension Contributions

Revised Actuarial Standard of Practice No. 4 Measuring Pension Obligations and Determining Pension Plan Costs or Contributions (ASOP 4) requires actuaries to disclose additional contribution information and provide contribution commentary when preparing an actuarial funding valuation. The requirements include:

- Calculate, disclose, and provide commentary on a **Low-Default-Risk Obligation Measure** (LDROM; section 3.11).
- Calculate, disclose, and provide commentary on a **Reasonable Actuarially Determined Contribution** (RAD; section 3.21).
- Provide disclosures and assessments regarding the **implications of a pension plan's contribution allocation** procedure or funding policy (section 3.19).

The remainder of this section provides information about each of these items. Please note that we would be glad to provide an enhanced discussion of these items upon request.

Low-Default-Risk Obligation Measure (LDROM)

The LDROM is a pension liability measurement calculated using the same data, assumptions, actuarial methods, and plan provisions as the actuarial funding valuation, but with the following adjustments:

- Use an immediate gain actuarial method (if not already used for the funding valuation).
- Use a discount rate “derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of benefits expected to be paid in the future.”

The Plan's Actuarial Accrued Liability, valuation funded status, and Actuarially Determined Contributions are currently calculated using a 4.25% discount rate, which is the Plan's long-term investment return assumption based on the target investment allocation. The discount rate used for the Plan's LDROM analysis in this report is based on the 12/31/2022 FTSE Pension Liability Index (short duration) as of the January 1, 2023 actuarial valuation date. The table below compares the actuarial funding liability to the corresponding LDROM liability on the valuation date.

	Actuarial Funding Basis	LDROM Basis
Actuarial Accrued Liability	\$5,398,662	\$5,065,975
Effective Interest Rate	4.25%	4.95%

Important topics like the Plan's funded status, contributions, and benefit security for current Plan members are affected by many factors related to the Plan's assets and investments. These elements include current assets in the plan; future contributions from participating employers and active plan members; and the investment returns generated on those assets and contributions. The LDROM provides an alternative perspective of the Plan's funded status but may not meaningfully address benefit security or contribution issues since it produces a liability measurement that's not directly related to the Plan's actual investments.

Pension Risk Information

Discussion of Pension Contributions (continued)

Reasonable Actuarially Determined Contribution (RADC)

If an actuary believes that an Actuarially Determined Contribution (ADC) is unreasonable (and it is not based on a prescribed assumption or method set by law), then ASOP 4 requires that the actuary separately calculate and disclose a “reasonable” ADC that meets certain criteria enumerated in ASOP 4, section 3.21.

We reviewed the data, assumptions, methods, and plan provisions used to calculate the Plan’s ADC and believe that they currently produce a reasonable ADC. Therefore, we have not calculated a separate RADC.

We are available to calculate ADCs using alternative assumptions and methods, if requested.

Implications of Contribution Allocation Procedure or Funding Policy

ASOP 4, section 3.19 requires an actuary to provide an assessment of the implications of the Plan’s contribution allocation procedure and/or funding policy. For purposes of this ASOP 4 section, contributions set by law or by a contract, such as a collective bargaining agreement, constitute a funding policy.

Items to review include:

- Implications of the funding policy on the Plan’s expected future contributions and funded status.
- If applicable, the length of time until funding policy contributions will exceed the Normal Cost plus interest on the Unfunded Actuarial Accrued Liability (UAAL).
- Estimated time period over which the UAAL is expected to be fully amortized.
- Whether the funding policy is “significantly inconsistent with the plan accumulating assets adequate to make benefit payments when due, and estimate the approximate time until assets are depleted.”

Because the Plan is very mature and well-funded on both an AVA and MVA basis, the Plan's funding policy is expected to be sufficient at accumulating adequate assets to make benefit payments when due as long as the District continues to make the Actuarially Determined Contributions. It's reasonable for the District to continue the current funding policy contributions to the Plan.

A large loss will be fully amortized after 2024, resulting in a much smaller amortization payment starting in 2025. This will significantly reduce the Plan's ADC (and ADEC) starting in 2025.

Please let us know if you have any questions about the implications of the Plan’s current funding policy and we will be glad to discuss in greater detail.

Supplementary Information

Summary of Plan Provisions

A. Plan Effective Date	Originally established effective September 1, 1961; last amended and restated January 1, 2011
B. Plan Year	January 1 to December 31
C. Participation	Safety employees hired before 1/1/2000
D. Eligibility to Retire	Normal: age 50 with 5 years of continuous service Late: termination of employment following Normal Retirement Date, no later than age 65
E. Adjusted Average Basic Monthly Compensation	Average of 36 months of basic monthly compensation immediate preceeding commencement of benefits reduced by \$133.33 for Social Security benefit earnings in excess of \$400
F. Service Retirement	Monthly benefit equal to 2.0% of Average Basic Monthly Compensation multiplied by years of service, limited to 75% of Adjusted Average Basic Monthly Compensation
G. Disability Retirement	Industrial: Monthly benefit equal to 50% of Average Basic Monthly Compensation Non-Occupational: Monthly benefit equal to 1.8% of Adjusted Average Basic Monthly Compensation multiplied by years of service
H. Benefit Forms	Normal form: Single life annuity Optional forms: <ul style="list-style-type: none"> - Joint and survivor annuity - Certain and life annuity - Modified cash refund annuity - Joint and contingent annuity
I. Preretirement Death Benefit	Basic Death Benefit (service-related or not yet retirement eligible): Refund of participant contributions plus interest at 6.25% plus lump sum equal to basic monthly compensation multiplied by years of service (up to 6 years) Monthly Death Benefit (retirement eligible, non-service related): Monthly survivor annuity equal to 50% of participant's accrued benefit Monthly Death Benefit (service-related): Monthly survivor annuity equal to 50% of participant's accrued benefit. Also, a special monthly survivor annuity is available to surviving unmarried children under the age of 22.
J. Termination Benefit	Vested: accrued monthly benefit Non-vested: Refund of participant contributions plus interest at 6.25%
K. Participant Contributions	4.67% of the first \$400 of basic monthly compensation plus 9% of basic monthly compensation in excess of \$400
L. Cost of Living Adjustment	Maximum 2% per year (after two years of retirement)
M. Changes since last valuation	None

Supplementary Information

Actuarial Methods

A. Actuarial Cost Method

The Entry Age Normal level percent of pay cost method. Under this method, the normal cost for an individual participant is the level percentage of pay required to accumulate the funds needed to pay the participant's projected benefits by their assumed retirement age, beginning on the date of entry and ending at the last age with any future benefits.

B. Amortization Method

Each year, unexpected changes in the unfunded actuarial accrued liability are amortized as a level dollar amount over a closed 15-year period beginning on the January 1st following the valuation date. These changes may be due to actuarial gains and losses, assumption changes, or plan changes.

C. Data Methods

East Bay Regional Park District supplied data for all participants and asset information for the year ending December 31, 2022. We have relied on this data in preparing this report. The data was reviewed for reasonableness and consistency, but we have not performed a complete audit.

D. Asset Method

The Actuarial Value of Assets (AVA) is equal to the Market Value of Assets (MVA) with investment gains and losses smoothed over five years. The AVA must also remain within 20% of the MVA.

E. Models Used

The results in this report are based on an actuarial valuation model with three components as outlined in Actuarial Standard of Practice No. 56 - Modeling (ASOP 56):

1. Information inputs including the data, assumptions, methods, and plan provisions outlined in this report,
2. Processing by the ProVal software, and
3. Our report template which translates the ProVal output into valuation results.

The model is intended to convert the information input above to usable actuarial valuation results. We have reviewed the software's output for reasonableness, and have independently checked sample one-person output where appropriate, but have otherwise relied on it.

F. Change in Actuarial Methods

None.

Supplementary Information

Actuarial Assumptions

A. Economic Assumptions

Valuation Date	<u>January 1, 2023</u>	<u>January 1, 2021</u>
Discount Rate / Investment Return	4.25%	4.45%
General Inflation (CPI-U)	2.50%	2.25%
Salary Increases	N/A	N/A
Cost of Living Adjustment	2.00%	2.00%

B. Demographic Assumptions

Mortality	Based on assumptions for Public Agency Safety members published in the December 2021 CalPERS experience study. These tables include generational mortality improvement using 80% of scale MP-2020.
Termination	N/A
Disability	N/A
Retirement	
Active members	N/A
Deferred members	Age 50
Form of payment	All future retirees are assumed to elect a single life annuity.
Expected expenses	Assumed to equal actual prior year administrative expenses projected to the contribution year with inflation, and then rounded to the nearest \$1,000.

C. Changes Since Last Valuation

- The discount rate / investment return assumption was updated to 4.25% based on an updated investment portfolio and capital market assumptions.
- The general inflation assumption increased from 2.25% to 2.50% based on an updated historical analysis of inflation rates and forward-looking market expectations.
- The mortality assumptions were updated from the rates published in the December 2017 CalPERS Experience Study to the rates published in the December 2021 CalPERS Experience Study.

Supplementary Information

Selection of Economic Assumptions

The Actuarial Standards Board (ASB) provides coordinated guidance for measuring pension and retiree group benefit obligations through a series of Actuarial Standards of Practice (ASOPs). ASOP No. 27, Selection of Economic Assumptions for Measuring Pension Obligations, requires that the actuary disclose the rationale used in selecting each economic assumption and any changes to economic assumptions.

The table below summarizes the rationale for selecting the economic assumptions. The rationale for assumption changes, along with a description of the assumptions themselves, is included in the Actuarial Assumption and Methods section of this report.

Economic Assumptions	
Assumption	Rationale for Selecting Assumption
Discount rate / Expected investment return	The long-term investment return for the trust was based on the expected return for the PARS Conservative portfolio provided by PARS. The assumption was adjusted for inflation and investment expenses (if necessary) and rounded to the nearest 0.25%. We reviewed the rate for reasonability using our internal capital market models.
Inflation rate	Based on analysis of historical CPI-U and 30-year TIPS data, the Federal Open Market Committee target inflation rate, and the 2023 Survey of Capital Market Assumptions produced by Horizon Actuarial Services.
Cost of living adjustment	Based on recent plan experience.

Supplementary Information**Selection of Non-Economic Assumptions**

The Actuarial Standards Board (ASB) provides coordinated guidance for measuring pension and retiree group benefit obligations through a series of Actuarial Standards of Practice (ASOPs). ASOP No. 35, Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations, requires that the actuary disclose the rationale used in selecting each non-economic assumption and any changes to the non-economic assumptions.

The table below summarizes the rationale for selecting the non-economic assumptions. The rationale for assumption changes, along with a description of the assumptions themselves, is included in the Actuarial Assumption and Methods section of the report.

Non-Economic Assumptions	
Assumption	Rationale for Selecting Assumption
Mortality	Based on the most recently published CalPERS rates.
Form of payment	Based on recent plan experience.
Expected expenses	Based on recent plan experience projected to the contribution year with inflation.

Supplementary Information

Important Notices

Purpose and Scope of the Valuation

This valuation has been prepared exclusively for the District, and solely to provide contribution information. It is important to recognize that calculations performed for other purposes (such as benefit design, investment policy, or plan accounting) may yield significantly different results. This report may not be used for any other purpose, and VIA Actuarial Solutions is not responsible for the consequences of any unauthorized use. Its content may not be modified, incorporated into or used in other material, or otherwise provided, in whole or in part, to any other person or entity, without our permission.

Assumptions and Methods

Since modeling all possible future outcomes is not possible or practical, the valuation is based on a single set of data, assumptions, methods, and plan provisions. We may also use estimates or simplifications to model future events in an efficient and cost-effective manner, so long as we believe that these simplifying techniques do not affect the reasonableness of the valuation results.

The District is responsible for the assumptions, methods, and funding policies used to prepare the valuation. The assumptions used in this report are among a wide range of possibilities (each of which may be considered reasonable).

A different set of reasonable assumptions would produce different results. This report does not include analysis of the effect of alternative assumptions because that is beyond the limited scope of our engagement. If the District is interested in analyzing the effect of different assumption sets on the valuation results, then we suggest a sensitivity analysis to be performed at a later date.

Actuarial Measurement Changes

An actuarial valuation is only a snapshot of a plan's estimated financial condition at a single point in time. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: retiree group benefits program experience differing from that anticipated by the assumptions; changes in assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in retiree group benefits program provisions or applicable law. Retiree group benefits models necessarily rely on the use of approximations and estimates, and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements.

Actuarial valuations are extremely complex and it's possible that data, computer coding, and mathematical errors could occur during the valuation process. Errors in a valuation discovered after its preparation may be corrected by revising the current valuation or in a subsequent year's valuation.

Supplementary Information**Important Notices (continued)****Accuracy of Substantive Plan Information and Census Data**

For purposes of this valuation, we have assumed that the District has validated our summary of the substantive plan provisions and provided us with any relevant information regarding interpretation of the plan provisions and changes to the plan terms since the prior valuation.

The District is solely responsible for the validity, accuracy and comprehensiveness of this information. If any data or plan provisions supplied are not accurate and complete, the valuation results may differ significantly. Moreover, different interpretations of the substantive plan may produce substantially different valuation results.

Impact of Legislative Changes

The legislative and regulatory environments have many implications for pension plans. Changes to current rules and implementation of new legislation are difficult to predict but could have a dramatic impact on the value of future plan benefits.

Supplementary Information

Glossary of Selected Terms

This section provides the definitions of applicable terminology in the actuarial valuation.

Actuarial Accrued Liability (AAL) - the portion of the actuarial present value of benefits not attributable to future normal costs, determined under the actuarial cost method.

Actuarial Cost Method - the method used to allocate pension liabilities between past, current, and future years.

Actuarial Present Value of Benefits - the present value of a series of future pension benefits, determined as of a given date by applying a set of actuarial assumptions.

Discount Rate - the interest rate used to adjust liabilities and obligations for the time value of money.

Long-Term Expected Investment Return - the average expected asset return expected to be earned by the pension investments over time.

Normal Cost - the portion of the actuarial present value allocated to the valuation year by the actuarial cost method.

Valuation Date - the date when assets and liabilities are measured for this valuation.