

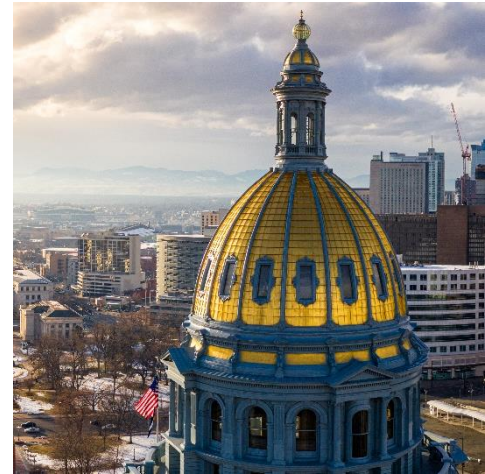


Pension Review Subcommittee

July 17, 2023

Amy C. McGarrity, Interim Executive Director/Chief Investment Officer

Michael Steppat, Public & Government Affairs Manager



Agenda

- **Overview**
- **2022 Annual Comprehensive Financial Report (ACFR)**
 - **Facts & Figures**
 - **Summary of Valuation Highlights**
 - **Investment Performance**
- **2023 Legislative Session**
- **What to Expect Moving Forward**



Public Employees' Retirement Association of Colorado (PERA)

Defined Benefit Plan

Stable benefit payments to over 132,000 retired public employees

Defined Contribution Plan

Choice available to State and Local Government employees

Voluntary Investment Program

PERAPlus 401(k) and 457 Plans



Health Benefits Program

Active and retired member coverage



Governance



Colorado General Assembly

- Sets benefit and contribution structure, along with other plan requirements
- Provides legislative oversight via the following committees:
 - Legislative Audit Committee
 - Joint Budget Committee
 - Joint Finance Committee (SMART Act)
 - Pension Review Commission
 - Pension Review Subcommittee



PERA Board of Trustees

- Trustees, as fiduciaries, oversee investment program and benefits administration
- Adopt and revise rules in accordance with state statutes
- Sets policy and delegates the policy implementation to the Executive Director

2022 Annual Report



ANNUAL COMPREHENSIVE FINANCIAL REPORT
FOR THE YEAR ENDED DECEMBER 31, 2022



Guiding our mission with
integrity and purpose



INVESTMENT PORTFOLIO FAIR VALUE

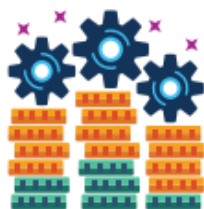
\$55.9 billion

(DEFINED BENEFIT PLANS)



NET RATE OF RETURN

(13.4%)



MEMBERS ACTIVELY CONTRIBUTING TO PERA

206,646



EMPLOYERS

410



RETIREES AND BENEFIT RECIPIENTS

135,485



ANNUAL RETIREMENT BENEFIT PAYMENTS

\$5.2 billion



INVESTED IN COLORADO-BASED COMPANIES, PARTNERSHIPS, AND ASSETS

\$948.9 million



30-YEAR RATE OF RETURN

8.3%

(ANNUALIZED, GROSS-OF-FEES)

2022 in Review

Facts & Figures as of December 31, 2022

Summary of Valuation Highlights

» Asset Return

- The market value of assets for all Funds combined decreased from \$64.8 billion (as of December 31, 2021) to \$54.7 billion (as of December 31, 2022)
 - » The investment return was approximately -13.4%, net of investment expenses
- The actuarial value of assets – which smooths investment gains and losses over four years – increased from \$57.2 billion (as of December 31, 2021) to \$60.9 billion (as of December 31, 2022)
 - » Gradual recognition of deferred gains and losses resulted in a 9.3% return on actuarial value of assets, compared to 7.25% expected

» Effective Amortization Periods

Trust Fund	December 31, 2022	December 31, 2021	Change
State Division	20 years	23 years	-3
School Division	24 years	26 years	-2
Local Government Division	9 years	12 years	-3
Judicial Division	6 years	7 years	-1
DPS Division*	7 years	9 years	-2

Summary of Valuation Highlights (cont.)

» Actuarially Determined Contribution Rates

Trust Fund	December 31, 2022 (ADC for 2024)	December 31, 2021 (ADC for 2023)	Change
State Division	19.77%	20.71%	-0.94%
School Division	20.58%	21.13%	-0.55%
Local Government Division	8.28%	9.20%	-0.92%
Judicial Division	12.78%	13.83%	-1.05%
DPS Division	6.04%	6.77%	-0.73%

★ Segal

» Unfunded Actuarial Accrued Liability (UAAL)

- The actuarial accrued liability increased from \$84.4 billion (as of December 31, 2021) to \$87.2 billion (as of December 31, 2022)
- The UAAL *decreased* from \$27.2 billion to \$26.3 billion.
 - » \$0.9 billion decrease includes an expected decrease of \$0.6 and \$1.1 billion gain from investments, net of \$0.8 billion loss from demographic experience

Automatic Adjustment Provision

	Item	State Division	School Division	Local Government Division	Judicial Division	Denver Public Schools Division	Total Weighted Average
1	Unfunded actuarial accrued liability as of December 31, 2022 (\$ in millions)	\$9,275.7	\$15,933.0	\$534.0	\$58.7	\$465.0	\$26,266.4
2	Member contribution rate	11.10%	11.00%	9.01%	11.00%	11.00%	10.99%
3	Employer contribution rate	20.04%	19.77%	13.05%	23.26%	8.88%	19.54%
4	Actuarially determined employer contribution rate	19.77%	20.58%	8.28%	12.78%	6.04%	19.77%
5	Direct distribution rate						1.98%
6	Blended total contribution rate: 2 + 3 + 5						32.51%
7	Blended total required contribution: 2 + 4						30.76%
8	Ratio of blended total contribution rate to blended total required contribution: 6 ÷ 7						105.69%



Automatic changes are triggered when the ratio of the Blended Total Contribution Rate to the Blended Total Required Contribution is less than 98% (or greater than 120%)

» As of December 31, 2022, this ratio is equal to **105.69%**



INTERNAL AND EXTERNAL MANAGEMENT EXPENSES

\$212.1 million



ASSETS MANAGED IN-HOUSE BY PERA STAFF

59%



SAVINGS IN 2022 DUE TO INTERNAL INVESTMENT MANAGEMENT

\$60 million



BASIS POINTS OF TOTAL ASSETS SPENT ON MANAGEMENT

38

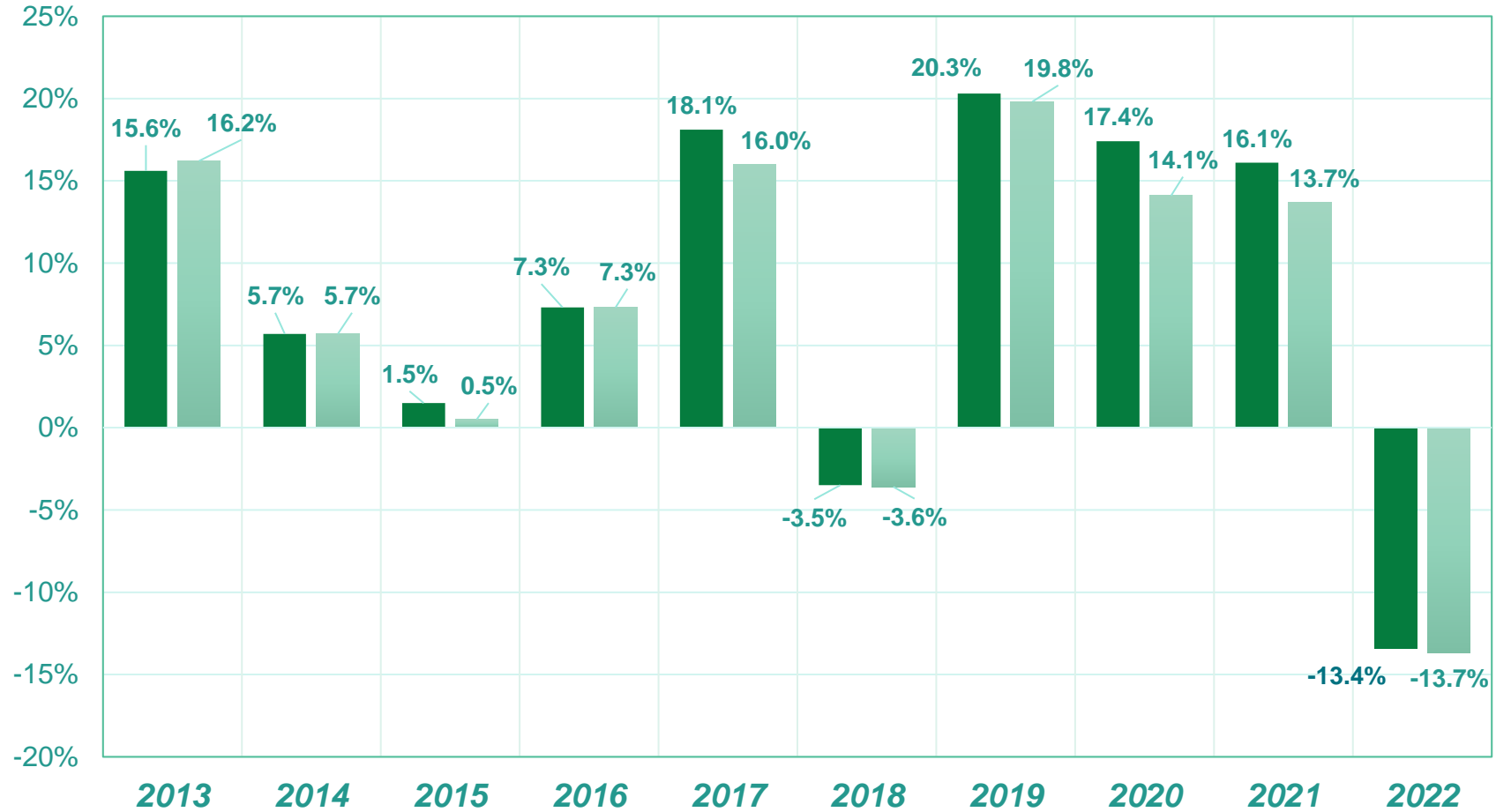
PERA's Investment Program

2022 Investment Performance

Rates of Return Over 10 Years (Net-of-Fees)

■ Rates of Return
■ Policy Benchmark

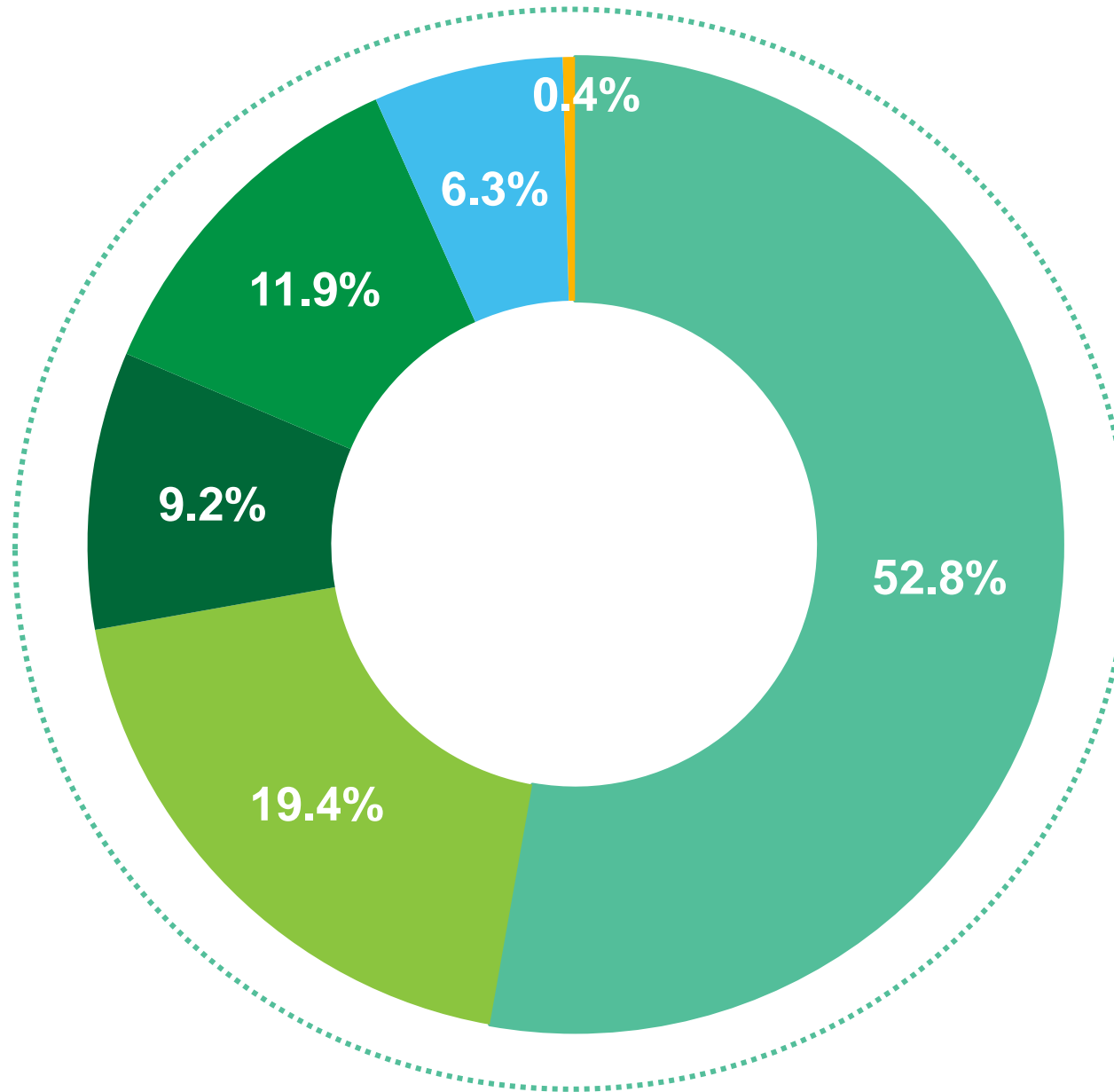
The 10-year annualized return is 8.0%



PERA's Asset Allocation

As of December 31,
2022

- Global Equity
- Fixed Income
- Private Equity
- Real Estate
- Alternatives
- Cash

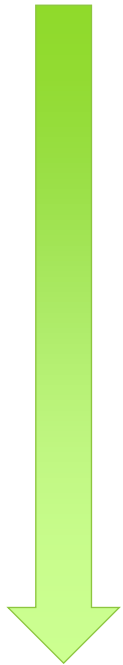


Market Performance:

2023 YTD* vs. 2022 Calendar Year

Equities (non-China) and fixed income are positive YTD while commodities and oil are reversing course from last year. U.S. equities officially entered a bull market and are up over 20% from October lows.

2023 Highest Performers



All returns are presented in unhedged USD terms
 *YTD as of 7/13/2023 (CPI-U YTD as of 6/30/2023)

2023 Legislation Concerning PERA

Senate Bill 23-016: Greenhouse Gas Emission Reduction Measures

- This bill included multiple provisions that are meant to reduce greenhouse gas emissions in the state, along with one section concerning PERA, which requires a description of climate-related investment risks, impacts, and strategies to be included as part of its annual investment stewardship report, which is posted on the PERA website.

Senate Bill 23-056: Compensatory Direct Distribution to PERA

- The bill requires the state to make an additional payment to PERA in the amount of the balance of the PERA Payment Cash Fund, plus \$10 million in General Fund, which results in a total payment of approximately \$14.5 million. This payment is intended to recompense PERA for the cancellation of a previously scheduled July 1, 2020, direct distribution of \$225 million, in addition to the compensatory payment provided in previous legislation. The bill also repeals the PERA Payment Cash Fund on July 1, 2023.

Senate Bill 23-163: Colorado Parks and Wildlife Officers Classified as State Troopers

- The bill modifies the definition of “state trooper” to include wildlife officers and parks and recreation officers hired on or after January 1, 2011, by Colorado Parks and Wildlife in the Department of Natural Resources. It applies the state trooper contribution rate and benefits to eligible employees and their employers effective July 1, 2023.

What to Expect Moving Forward

PERA Board of Trustees' 2023 Remaining Scheduled Meetings*

Planning Session & Board Meeting September 20-23, 2023
Board Meeting November 17, 2023

Legislative Committee Hearings Concerning PERA

Legislative Audit Committee August 7, 2023
Joint Budget Committee TBD**
SMART Act Hearing w/ Joint Finance Committee TBD**

*Dates subject to change if necessary. All meetings held at PERA offices (1301 Pennsylvania Street, Denver, CO 80203) except for the September Planning Session which is held off-site in Colorado Springs, CO.

**The Joint Budget Committee Hearing for PERA and the SMART Act Hearing for PERA w/ the Joint Finance Committee have not yet been scheduled but will be held sometime in November/December of 2023 and in January of 2024, respectively.

Snapshot of PERA Significant Events Timeline

	2023	2024	2025	2026	2027
Asset/Liability Study					
Actuarial Experience Study					
Actuarial Audit					
Pension Funding Policy					
OPEB Funding Policy					
Strategic Planning					
Governance Manual Review					
SB 10-001 / SB 18-200 Report					
HB 22-1101 Rural School District Working After Retirement Report					
HB 20-1127 BOCES Working After Retirement Report					
SB 09-282 DPS True-Up					

Questions?



Appendix

2023 Legislation Concerning PERA

Postponed Indefinitely

House Bill 23-1092: Limiting Use of State Money

House Bill 23-1144: PERA Defined Benefit Plan Payments to Ex-spouse

House Bill 23-1176: PERA Defined Contribution Plan School Personnel

Senate Bill 23-104: PERA Denver Public Schools Division Employer Contribution Reduction

Funded Period Progress (In Years)

As of December 31

Division Trust Fund	2021 Funding Periods ¹	2022 Funding Periods ¹	2022 Projected Funding Periods ²
State	23	20	32
School	26	24	34
Local Government	12	9	23
Judicial	7	6	12
Denver Public Schools (DPS)	9	7	13

¹Funding periods are determined on a closed-group basis and shown as of prior and current valuation dates.

²Funding periods are determined on an open-group basis and shown as of the current valuation date only.

Funded Status

As of December 31, 2022

Total Unfunded Liability: \$26.3 billion
Funded Status: 69.9%



STATE UNFUNDED LIABILITY
\$9.3 billion

FUNDED STATUS
66.5%



SCHOOL UNFUNDED LIABILITY
\$15.9 billion

FUNDED STATUS
67.0%



LOCAL GOVT. UNFUNDED LIABILITY
\$534 million

FUNDED STATUS
91.0%



JUDICIAL UNFUNDED LIABILITY
\$59 million

FUNDED STATUS
88.5%



DPS UNFUNDED LIABILITY
\$465 million

FUNDED STATUS
90.3%

Membership – Active Pension

Item	State Division General	State Division Troopers	School Division	Local Government Division	Local Government Division State Troopers	Judicial Division	Denver Public Schools Division
December 31, 2022:							
Number	48,820	2,072	128,057	12,071	32	340	15,254
Average age	45.5	36.3	44.5	43.9	37.1	53.3	41.1
Average service	9.2	5.6	9.0	7.8	2.1	11.9	7.6
Average payroll	\$61,864	\$79,043	\$44,279	\$62,784	\$75,023	\$166,369	\$53,127
December 31, 2021:							
Number	51,885	1,592	125,007	12,716	29	345	15,695
Average age	45.4	38.0	44.7	45.0	37.0	54.1	40.9
Average service	9.0	7.3	8.8	7.8	1.3	12.2	7.2
Average payroll	\$57,185	\$78,807	\$43,724	\$56,780	\$59,750	\$161,681	\$52,462
Change							
Number	-5.9%	+30.2%	+2.4%	-5.1%	+10.3%	-1.4%	-2.8%
Average payroll	+8.2%	+0.3%	+1.3%	+10.6%	+25.6%	+2.9%	+1.3%

Schedule of Computed Employer Contribution Rates for the 2024 Plan Year
Based upon the Results of the December 31, 2022, Actuarial Funding Valuation

Item	State Division	School Division	Local Government Division	Judicial Division	Denver Public Schools Division
Normal cost rates					
Service retirement benefits	8.20%	10.14%	8.34%	14.75%	8.81%
Disability retirement benefits	0.33%	0.21%	0.31%	0.39%	0.21%
Survivor benefits	0.25%	0.20%	0.28%	0.47%	0.19%
Termination withdrawals	2.84%	2.83%	2.66%	1.01%	3.40%
Refunds	0.84%	0.65%	0.83%	0.07%	0.41%
Administrative expense load	0.40%	0.40%	0.40%	0.40%	0.40%
Total normal cost	12.86%	14.43%	12.82%	17.09%	13.42%
Member contributions	(11.10%)	(11.00%)	(9.01%)	(11.00%)	(11.00%)
Employer normal cost	1.76%	3.43%	3.81%	6.09%	2.42%
Percentage available to amortize unfunded actuarial accrued liabilities	18.07%	16.34%	9.16%	17.17%	6.46%
Effective amortization period	20 years	24 years	9 years	6 years	7 years
Total employer contribution rate for actuarially funded benefits	11.54%	11.40%	11.01%	14.91%	11.40%
Amortization Equalization Disbursement	5.00%	4.50%	2.20%	5.00%	4.50%
Supplemental Amortization Equalization Disbursement	5.00%	5.50%	1.50%	5.00%	5.50%
Less Health Care Trust Fund	(1.02%)	(1.02%)	(1.02%)	(1.02%)	(1.02%)
Less Annual Increase Reserve	(0.69%)	(0.61%)	(0.72%)	(0.63%)	(0.73%)
Less PCOP credit	N/A	N/A	N/A	N/A	(10.77%)
Employer contribution rate for DB plan	19.83%	19.77%	12.97%	23.26%	8.88%
DC Supplement	0.21%	N/A	0.08%	N/A	N/A

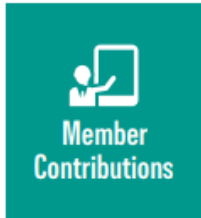
PERA IS ON SCHEDULE TO MEET ITS FUNDING GOAL



The automatic adjustment provision is reviewed on an annual basis to help ensure the long-term stability of benefits today and in the future.

As indicated in its 2022 *Annual Comprehensive Financial Report (ACFR)*, PERA is on schedule to meet its funding goal. This means the automatic adjustment provision will not trigger any additional changes in 2024.

Current Provisions



Member contributions will not be affected by the automatic adjustment provision in July 2024.

	State, School, and DPS Divisions	Safety Officers	Local Government	Judicial Division
As of July 1, 2023	11.00%	13.00%	9.00%	11.00%

See copera.org for more information on contribution rates.



Employer contributions will not be affected by the automatic adjustment provision in July 2024.

	State Division	Safety Officers (State)	School and DPS Divisions	Local Government	Safety Officers (Local Govt.)	Judicial Division
As of July 1, 2023	21.57%	24.27%	21.40%	14.76%	17.86%	24.91%

Actual DPS employer rate will be subject to the PCOPs offset. The DC Supplement may also affect rates in the State and Local Government Divisions effective January 1, 2024. See copera.org for more information on contribution rates.








The AI paid to eligible benefit recipients in July 2023 will be 1.0%. The July 2024 AI for most eligible benefit recipients will also be 1.0% since there was not an automatic adjustment provision announced in June 2023.

Automatic Adjustment Provision

New rates effective July 1, 2023



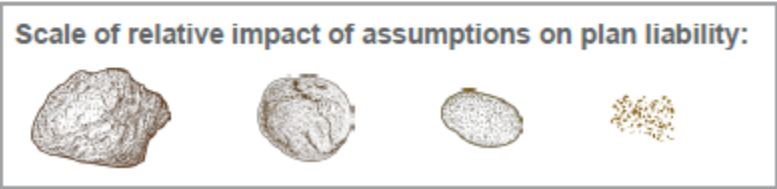
Economic

-  Inflation
-  Investment return
-  Active membership growth
-  Salary increase
-  Payroll growth

Demographic

-  Death after retirement
-  Death in active service
-  Retirement
-  Termination
-  Disability

Actuarial Assumptions



PERA Annual Increases vs National Inflation

	SB 2010 - 001 & SB 2018-200 - AS OF 2022									
	Increase for 2010		Increase for 2011		Increase for 2012		Increase for 2013		Increase for 2014	
	PERA	CPI-W*	PERA	CPI-W	PERA	CPI-W	PERA	CPI-W	PERA	CPI-W
Applicable Annual Increase	0.0%	-0.7%	2.0%	2.1%	2.0%	3.6%	2.0%	2.1%	2.0%	1.4%
Cumulative Increase	0.0%	-0.7%	2.0%	1.4%	4.0%	5.0%	6.1%	7.2%	8.2%	8.7%
Average Increase	0.0%	-0.7%	1.0%	0.7%	1.3%	1.7%	1.5%	1.8%	1.6%	1.7%

	SB 2010 - 001 & SB 2018-200 - AS OF 2022									
	Increase for 2015		Increase for 2016		Increase for 2017		Increase for 2018		Increase for 2019	
	PERA	CPI-W	PERA	CPI-W*	PERA	CPI-W	PERA	CPI-W	PERA	CPI-W
Applicable Annual Increase	2.0%	1.5%	2.0%	-0.4%	2.0%	1.0%	0.0%	2.1%	0.0%	2.5%
Cumulative Increase	10.4%	10.4%	12.6%	9.9%	14.9%	11.0%	14.9%	13.4%	14.9%	16.2%
Average Increase	1.7%	1.7%	1.7%	1.4%	1.7%	1.3%	1.6%	1.4%	1.4%	1.5%

	SB 2010 - 001 & SB 2018-200 - AS OF 2022									
	Increase for 2020		Increase for 2021		Increase for 2022		Increase for 2023		Increase for 2024	
	PERA	CPI-W	PERA	CPI-W	PERA	CPI-W	PERA	CPI-W	PERA	CPI-W
Applicable Annual Increase	1.25%	1.7%	1.25%	1.2%	1.0%	5.3%				
Cumulative Increase	16.3%	18.2%	17.8%	19.6%	18.9%	25.9%				
Average Increase	1.4%	1.5%	1.4%	1.5%	1.3%	1.8%				

* For purposes of determining purchasing power, CPI-W was allowed to reflect a negative value in these calculations even though PERA would never apply a reduction to benefits.