900 7th Street, NW, 2nd Floor
Washington, DC 20001
www.dcrb.dc.gov

Telephone (202) 343-3200
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OPEN SESSION

NOTICE OF VIRTUAL SPECIAL BOARD MEETING
JOSEPH M. BRESS, CHAIR
THURSDAY, DECEMBER 19, 2023
3:00 P.M.

WebEx Meeting	Telephone:	Conference Access Code:	Meeting Password:
	650-479-3208	2307 565 6282	JhesR3QBW26

AGENDA

3:00 PM **OPEN SESSION -- CALL TO ORDER AND ROLL CALL**

3:05 PM **CHAIR'S COMMENTS --ACTION ITEM** **TAB 2**

- CERTIFICATION OF RETIRED FIREFIGHTER ELECTION WINNER

3:15 PM **DCRB VALUATION BOARD PRESENTATION- ACTION ITEM** **TAB 3**

- APPROVE THE REPORT ON ACTUARIAL VALUATION

3:45 PM **ADJOURNMENT** **TAB 4**

"This meeting is governed by the Open Meetings Act. Please address any questions or complaints arising under this meeting to the Office of Open Government at opengovoffice@dc.gov."

December 18, 2023

Gianpiero Balestrieri, Executive Director
District of Columbia Retirement Board
900 7th Street, NW, 2nd Floor
Washington, DC 20001

Dear Gianpiero Balestrieri:

The attached report contains the certified results from the election for the Retired Firefighter Trustee for the District of Columbia Retirement Board.

Thank you. It has been a pleasure working with you.

Sincerely yours,

Chris Backert
CEO
Election-America, Inc.

Per the DCRB election rules Section 1520.8, below are the results:

(a) Votes were cast by paper ballot, by telephone, and by internet.

Race	Candidate	Internet	Paper	Phone	Total Votes
Retired Firefighter Trustee	Geoffrey P. Grambo	90	322	53	465
Retired Firefighter Trustee	Christopher John F. Turner	9	36	4	49

(b) Ballots cast and counted for each candidate are as follows:

Race	Candidate	Votes
Retired Firefighter Trustee	Geoffrey P. Grambo	465
Retired Firefighter Trustee	Christopher John F. Turner	49

(c) Total number of ballots issued were 1,553 original plus 0 replacement ballots plus 0 provisional ballots for a total of 1,553.

(d) There were 0 replacement ballots issued and no provisional ballots issued.

(e) The total number of ballots issued, but not cast was 1,038 (1,553 original ballots plus 0 replacement ballots less 515 ballots cast).

(f) Total number of ballots cast and counted was 515.

(g) The total number of ballots cast in each method of balloting:

Votes by Method			
Internet	Paper	Phone	Total
99	359	57	515

(h) There was 1 blank ballot(s) returned.

(i) There were 0 ballots returned and invalidated or voided:

- There were 0 overvotes (meaning a voter selected more than one candidate).
- There was 0 duplicate ballot.

(j) There were no claims of discrepancy or error in the counting of the ballots made during the balloting process.

(k) Geoffrey P. Grambo is the winner of the election.

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DISTRICT OF COLUMBIA RETIREMENT BOARD
ELECTION MOTION

MOTION

To certify Geoffrey P. Grambo as the winner of the 2023 Retired Firefighter's election

PRESENTED TO THE BOARD ON DECEMBER 19, 2023.

Bolton

District of Columbia Retirement Board

Teachers' Retirement Plan
Police Officers and Firefighters' Retirement Plan
September 30, 2023 Valuation Analysis

December 19, 2023

Bolton Team

Tom Vicente FSA, EA
Senior Consulting Actuary

Ann Sturner FSA, EA, MAAA
Senior Consulting Actuary

Michelle Boyles, FSA, ES, MAAA
Consulting Actuary

Agenda

4 Key Results

9 Gain/Loss Analysis

11 Asset History

13 Participant Data

24 Risk Assessments

28 Projections

B

Key Results

- **Funded ratio declined from 109.9% to 102.3% (Actuarial Value basis)**
  – Teachers: 91.8% (98.8% at 9/30/2022)
  – Police & Fire: 106.9% (114.7% at 9/30/2022)

- **District contribution increased from $130M for FY2024 to $224M for FY2025**
  – Solely for District provided benefits

- **Primary drivers of change**
  – Higher than expected salary increases. Primarily due to collective bargaining agreements.
  – Post-retirement COLA

Key Experience Findings

Source	Commentary	Impact on Liability
Post-retirement COLA	High inflation (offset in part by capped increases for some retirees)	1.3% increase
Salary Increases	Higher than long term expectations	3.2% increase
Overall	Primarily due to Salary Increases	4.9% increase

Pension Results

	Actuarial Value of Assets		Market Value of Assets	
Plan	**9/30/2022**	**9/30/2023**	**9/30/2022**	**9/30/2023**
Teachers	98.8%	91.8%	89.6%	89.3%
Police	112.4%	104.5%	101.9%	101.7%
Fire	120.0%	112.5%	108.8%	109.5%
Police & Fire	114.7%	106.9%	104.0%	104.0%
Total	**109.9%**	**102.3%**	**99.6%**	**99.5%**

- Funded levels are very strong compared to other large cities and states
  - NASRA survey shows an aggregate FY2022 funded ratio of 76.1%

FUNDED STATUS

Pension Results

	Teachers	Police	Fire	Total
Employer Normal Cost Rate (incl. expenses)	7.02%	32.18%	31.71%	17.73%
Unfunded Liability Rate	3.33%	(3.86%)	(9.39%)	(0.60%)
Total Employer Rate	10.35%	28.32%	22.32%	17.13%
Estimated 2025 FY Payroll	$728.1	$351.1	$195.1	$1,274.3
Actuarially Determined Employer Contribution	$75.4	$99.4	$43.6	$218.4
Section 1-907.02(c) Contribution Adjustment	$5.6	$0.2	$0.3	$6.1
Actuarially Determined Employer Contribution after Adjustment	$81.0	$99.6	$43.9	$224.4

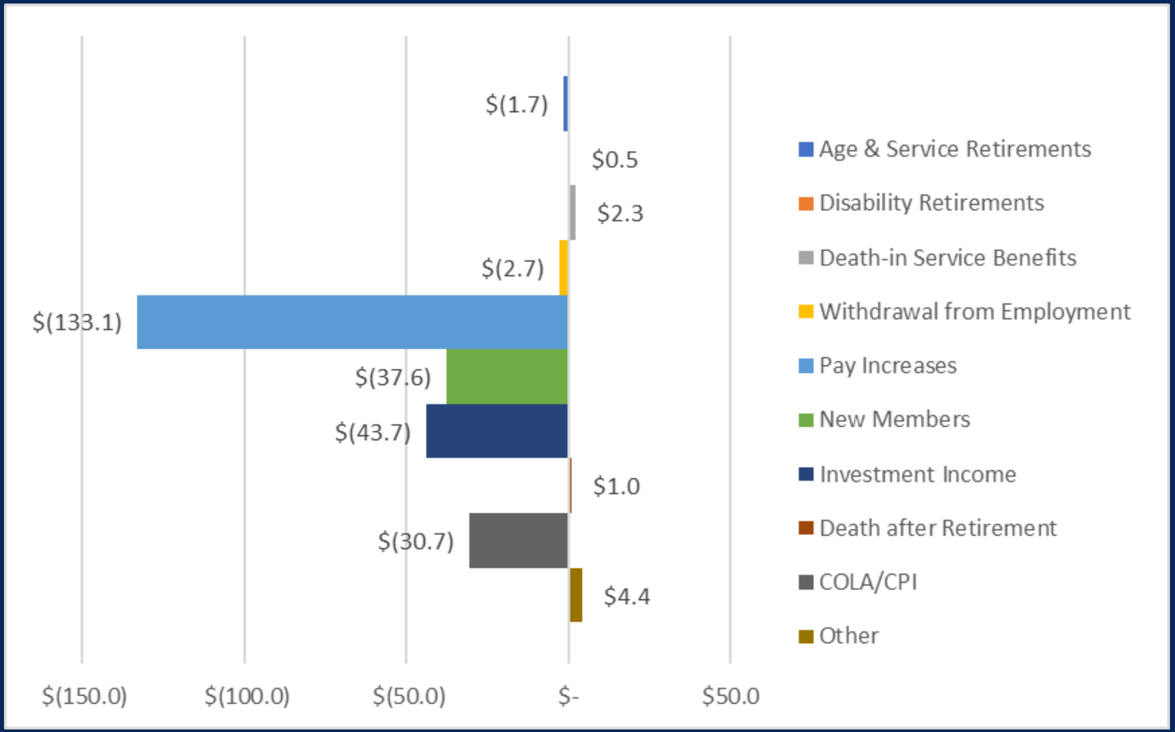
FY2025 CONTRIBUTIONS ($ MILLIONS)

Reconciliation of Contribution Requirement

Source	Increase/ (Decrease) in Contribution	Cumulative Employer Contribution
October 1, 2022 Valuation (for FY 2023)		$130.1
Expected Normal Cost Increase	$7.6	137.7
Section 1-907.02(c) Contribution Adjustment from 2021 Valuation	12.3	150.0
Actuarial Value of Assets Change	12.2	162.2
Net Demographic Experience	46.0	208.2
Net COLA Experience	10.1	218.3
Plan Amendments	0.0	218.3
Assumption and/or Method Changes	0.0	218.3
Section 1-907.02(c) Contribution Adjustment from 2022 Valuation	6.1	224.4
October 1, 2023 Valuation (for FY 2025)		$224.4

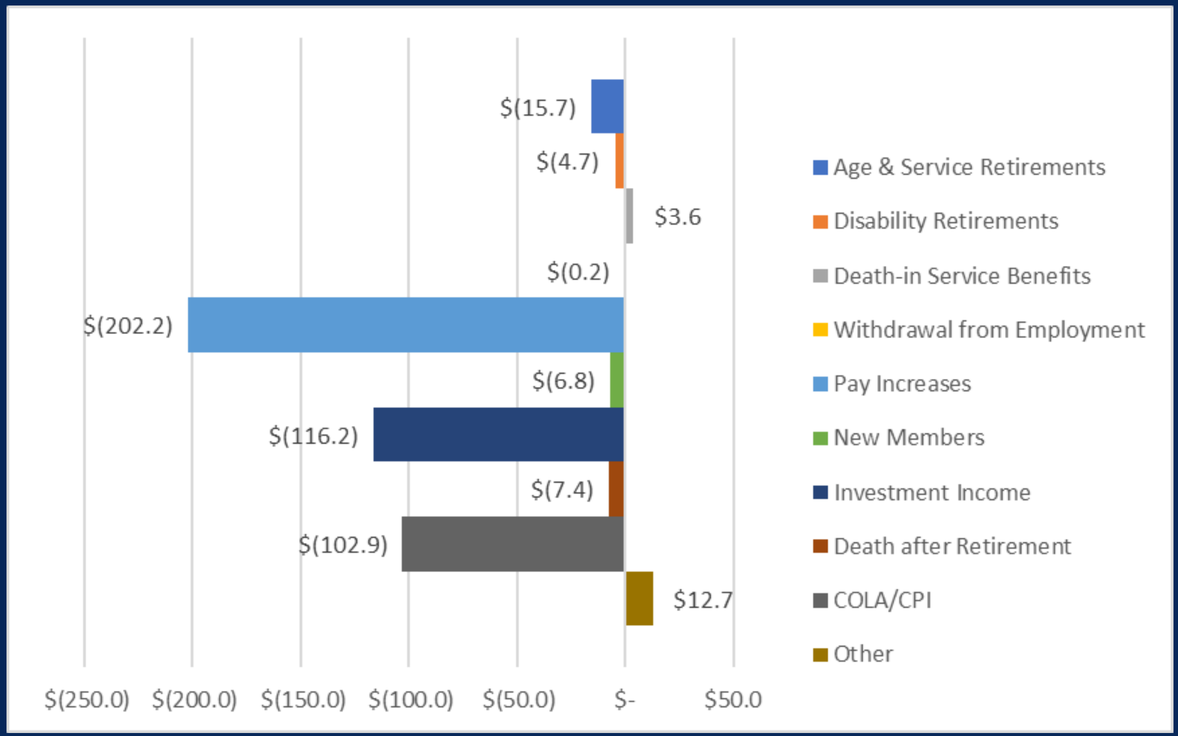
($ MILLIONS)

Teachers Actuarial Gain/(Loss) Analysis



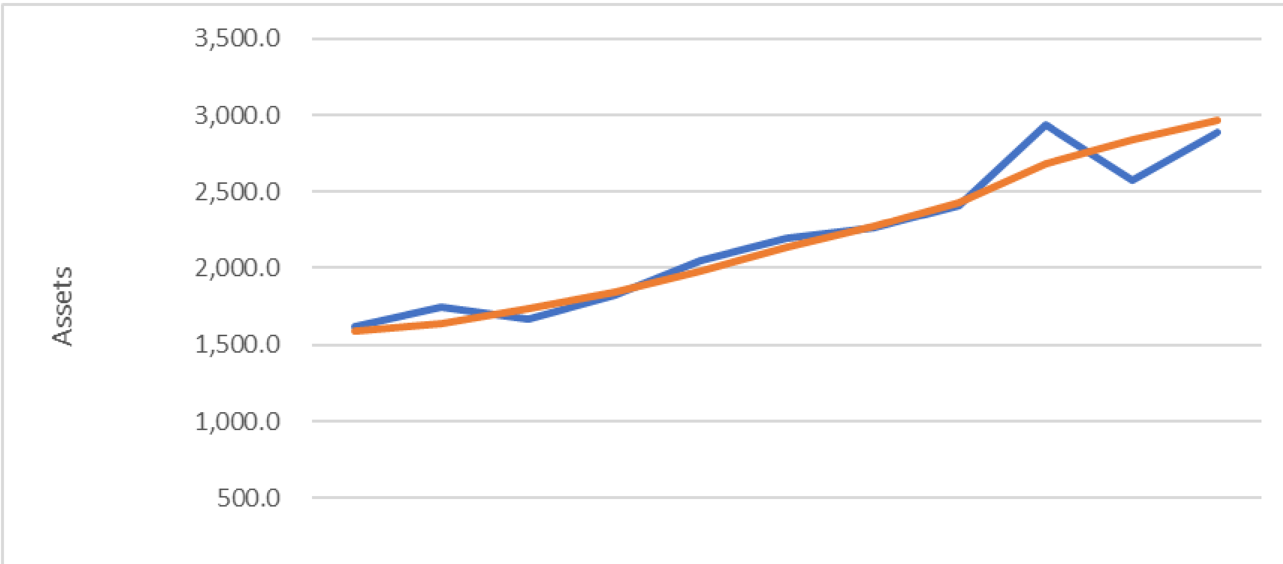
($MILLIONS)

Police & Fire Actuarial Gain/(Loss) Analysis



($MILLIONS)

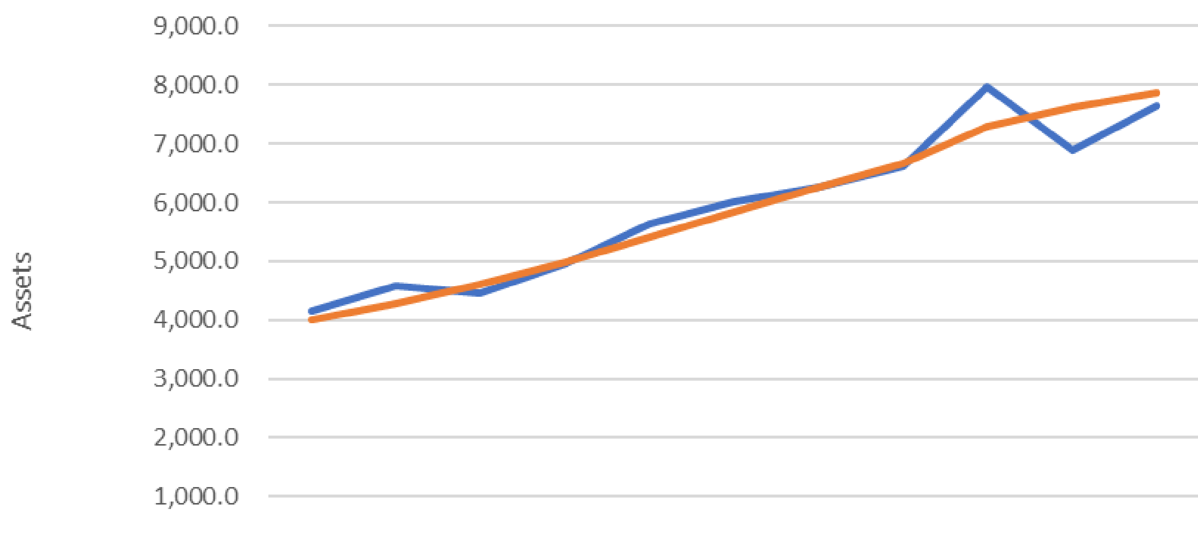
Teachers Assets



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Market Value	1,622	1,746	1,671	1,822	2,051	2,193	2,264	2,411	2,934	2,573	2,884
Actuarial Value	1,585	1,638	1,732	1,845	1,982	2,139	2,271	2,431	2,684	2,838	2,966

($MILLIONS)

Police & Fire Assets



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Market Value	4,168	4,588	4,462	4,954	5,629	6,015	6,256	6,620	7,963	6,901	7,653
Actuarial Value	4,013	4,288	4,607	4,985	5,406	5,848	6,269	6,676	7,290	7,612	7,864

($MILLIONS)

Teachers Participant Reconciliation

Teachers	Active Participants	Inactive Participants: Retirees	Inactive Participants: Disabled Retirees	Inactive Participants: Beneficiaries	Inactive Participants: Vested Terms	Total
Participants in Last Valuation	6,088	3,762	102	201	1,718	11,871
Death	(7)	(98)	(8)	(5)	0	(118)
Disabled	0	0	0	0	0	0
Retired	(61)	94	0	0	(33)	0
Vested Termination	(238)	0	0	0	238	0
Nonvested Termination	(444)	0	0	0	0	(444)
Return of Contributions/Benefits Ended	(94)	(3)	0	(3)	(41)	(141)
New Actives	874	0	0	0	0	874
Rehire from Vested Term	38	0	0	0	(38)	0
Rehire from Nonvested Term	17	0	0	0	0	17
New Beneficiaries	0	0	0	18	0	18
Data Adjustment	(2)	6	1	(1)	0	4
Participants in This Valuation	6,171	3,761	95	210	1,844	12,081

In addition, there are 1,287 participants who are non-vested and due a refund of employee contributions.

CHANGE IN PARTICIPANT COUNTS FROM 7/1/2022 TO 7/1/2023

Police Participant Reconciliation

Police	Active Participants	Inactive Participants: Retirees	Inactive Participants: Disabled Retirees	Inactive Participants: Beneficiaries	Inactive Participants: Vested Terms	Total
Participants in Last Valuation	3,282	2,478	335	438	258	6,791
Death	(3)	(22)	(2)	(10)	0	(37)
Disabled	(9)	0	12	0	(3)	0
Retired	(129)	152	0	0	(23)	0
Vested Termination	(46)	0	0	0	46	0
Nonvested Termination	(60)	0	0	0	0	(60)
Return of Contributions/Benefits Ended	(35)	0	0	(6)	(16)	(57)
New Actives	142	0	0	0	0	142
Rehire from Vested Term	2	0	0	0	(2)	0
Rehire from Nonvested Term	2	0	0	0	0	2
New Beneficiaries	0	0	0	30	0	30
Data Adjustment	0	(1)	0	1	0	0
Participants in This Valuation	3,146	2,607	345	453	260	6,811

In addition, there are 181 participants who are non-vested and due a refund of employee contributions.

CHANGE IN PARTICIPANT COUNTS FROM 7/1/2022 TO 7/1/2023

Fire Participant Reconciliation

Fire	Active Participants	Inactive Participants: Retirees	Disabled Retirees	Beneficiaries	Vested Terms	Total
Participants in Last Valuation	1,851	853	101	168	98	3,071
Death	(2)	(10)	0	(3)	0	(15)
Disabled	(6)	0	7	0	(1)	0
Retired	(47)	58	0	0	(11)	0
Vested Termination	(11)	0	0	0	11	0
Nonvested Termination	(28)	0	0	0	0	(28)
Return of Contributions/Benefits Ended	(4)	(1)	(1)	(5)	(6)	(17)
New Actives	134	0	0	0	0	134
Rehire from Vested Term	0	0	0	0	0	0
Rehire from Nonvested Term	0	0	0	0	0	0
New Beneficiaries	0	0	0	12	0	12
Data Adjustment	0	1	0	0	0	1
Participants in This Valuation	1,887	901	107	172	91	3,158

In addition, there are 91 participants who are non-vested and due a refund of employee contributions.

CHANGE IN PARTICIPANT COUNTS FROM 7/1/2022 TO 7/1/2023

Active and Retired Statistics

Teachers	2022	2023	% Change
Total Active Counts	6,088	6,171	1.4%
Total Active Salary	$612,462,712	$700,091,539	14.3%
Average Active Salary	$100,602	$113,449	13.0%
Total Retiree Counts*	4,065	4,066	0.0%
Average Annual District Benefit	$23,785	$25,625	7.7%

Police	2022	2023	% Change
Total Active Counts	3,282	3,146	-4.1%
Total Active Salary	$313,391,337	$337,604,069	7.7%
Average Active Salary	$95,488	$107,312	12.4%
Total Retiree Counts*	3,251	3,405	4.7%
Average Annual District Benefit	$42,718	$46,540	8.9%

Fire	2022	2023	% Change
Total Active Counts	1,851	1,887	1.9%
Total Active Salary	$168,700,463	$187,613,543	11.2%
Average Active Salary	$91,140	$99,424	9.1%
Total Retiree Counts*	1,122	1,180	5.2%
Average Annual District Benefit	$45,703	$49,646	8.6%

*Service Retired, Disabled and Beneficiaries (Receiving District Benefits)

Active to Inactive Status Movements

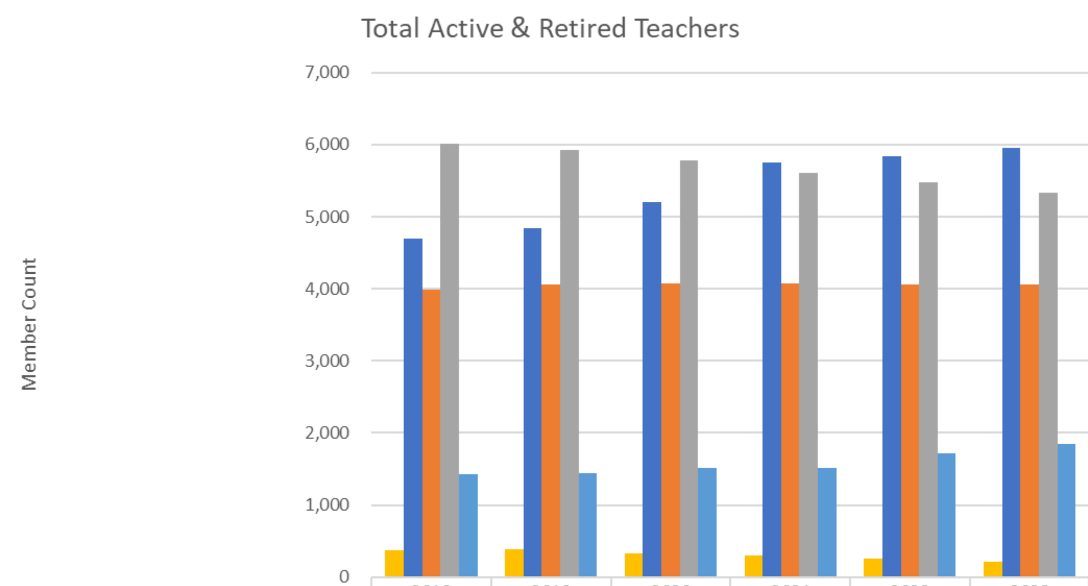
Teachers	Active Participants 2022	Active Participants 2023
Retired	75	61
Vested Termination	296	238
Nonvested Termination*	493	538

Police	Active Participants 2022	Active Participants 2023
Retired	124	129
Vested Termination	59	46
Nonvested Termination*	94	95

Fire	Active Participants 2022	Active Participants 2023
Retired	87	47
Vested Termination	20	11
Nonvested Termination*	37	32

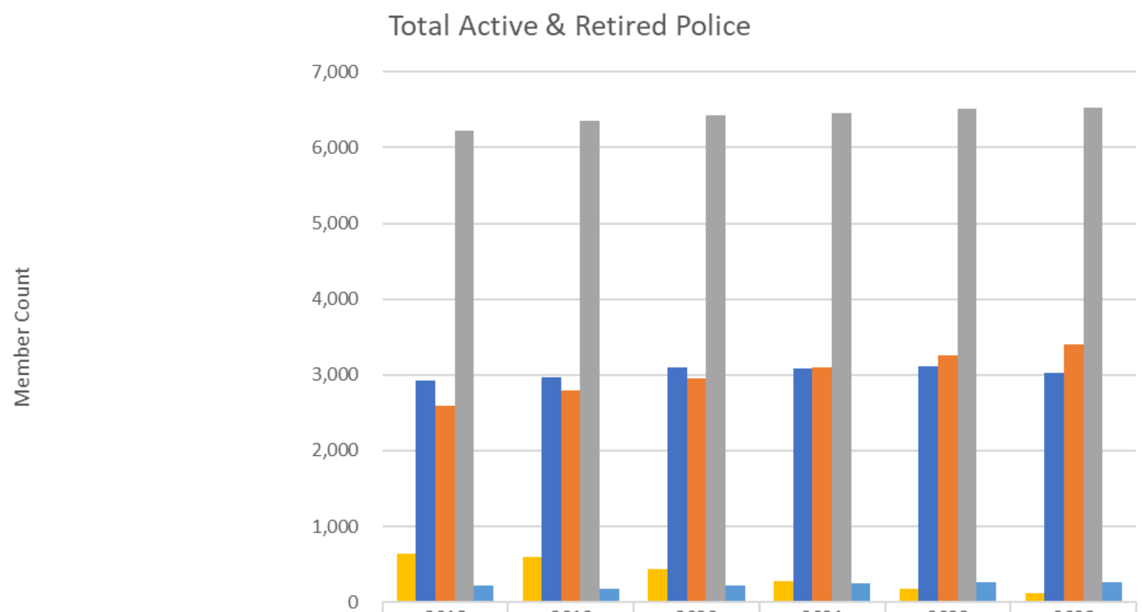
*Includes active participants who received a refund of contributions.

Total Active & Retired Teachers



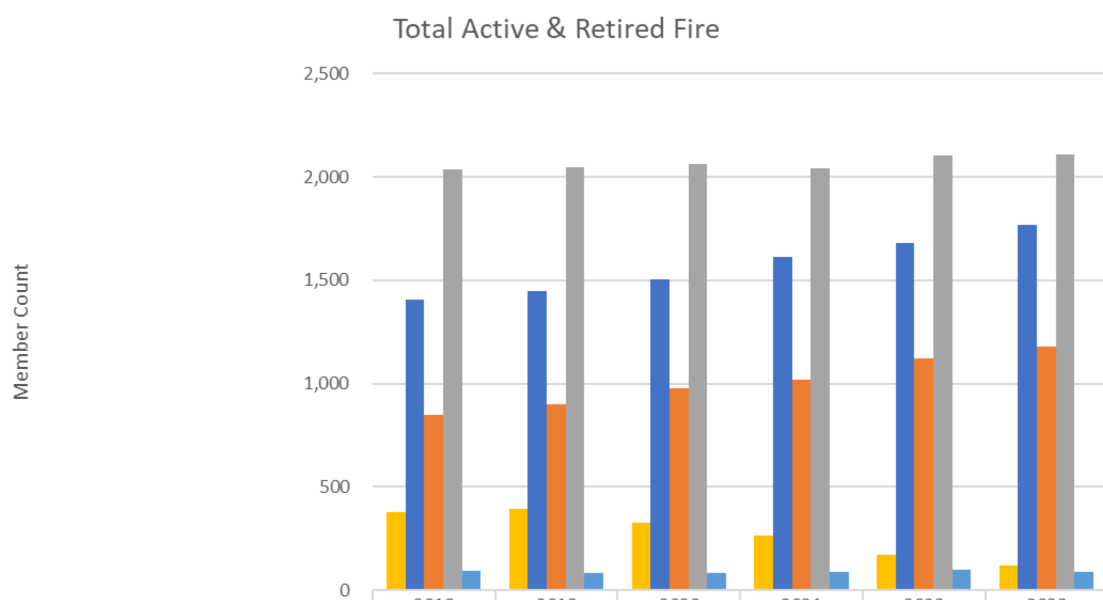
	2018	2019	2020	2021	2022	2023
Active Members hired Prior to 7/1/1997	365	382	332	294	250	219
Active Members hired After 7/1/1997	4,701	4,844	5,199	5,756	5,838	5,952
Retired District Members	3,990	4,059	4,071	4,072	4,065	4,066
Retired District + Federal Members	6,006	5,923	5,776	5,603	5,472	5,331
Deferred Vested Members	1,429	1,446	1,510	1,514	1,718	1,844

Total Active & Retired Police



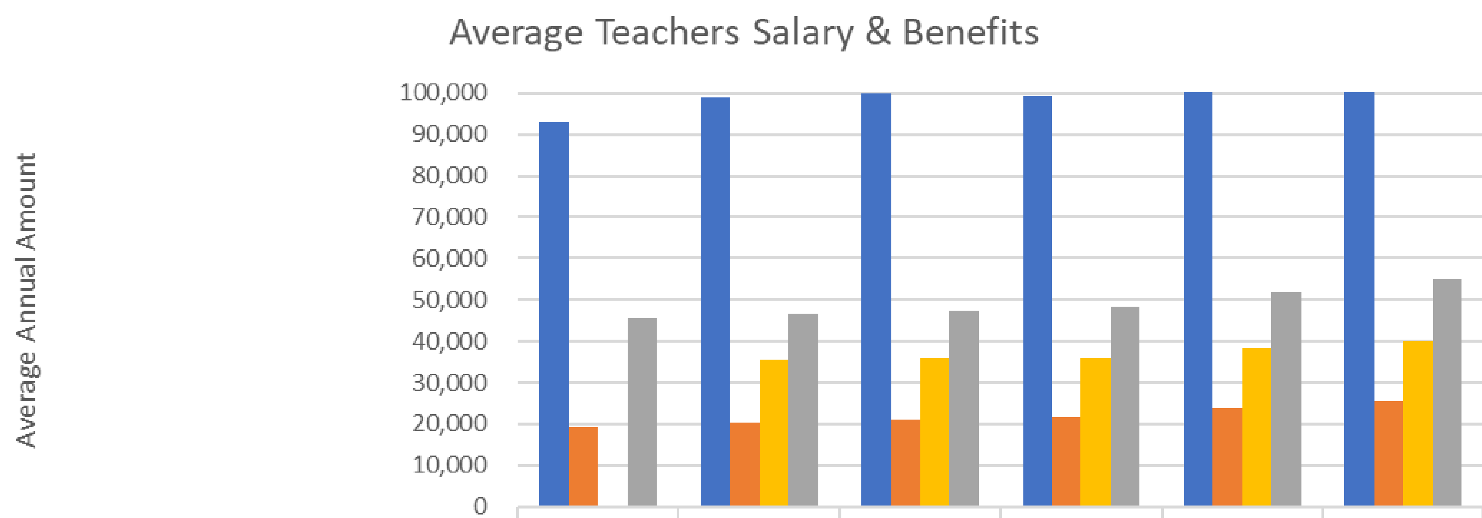
	2018	2019	2020	2021	2022	2023
Active Members hired Prior to 7/1/1997	643	595	439	284	170	121
Active Members hired After 7/1/1997	2,924	2,971	3,105	3,082	3,112	3,025
Retired District Members	2,593	2,799	2,952	3,095	3,251	3,405
Retired District + Federal Members	6,229	6,359	6,420	6,461	6,506	6,523
Deferred Vested Members	222	179	219	252	258	260

Total Active & Retired Fire



	2018	2019	2020	2021	2022	2023
Active Members hired Prior to 7/1/1997	377	391	327	262	169	117
Active Members hired After 7/1/1997	1,405	1,449	1,506	1,614	1,682	1,770
Retired District Members	848	900	977	1,020	1,122	1,180
Retired District + Federal Members	2,037	2,045	2,062	2,041	2,102	2,107
Deferred Vested Members	93	82	84	90	98	91

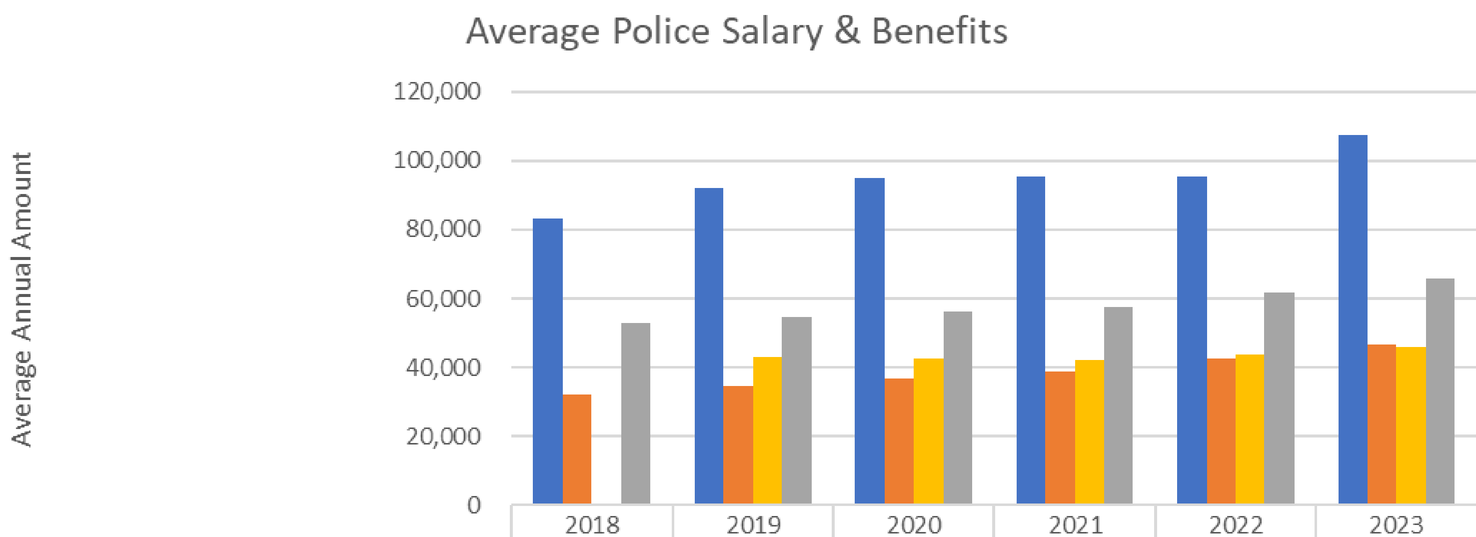
Average Teachers Salary & Benefits



	2018	2019	2020	2021	2022	2023
Average Annual Salary	92,923	98,854	99,771	99,253	100,602	113,449
Average Annual District Benefits	19,182	20,162	20,970	21,761	23,785	25,625
Average Annual Federal Benefits		35,601	35,858	35,918	38,151	39,953
Average Annual District + Federal Benefits	45,572	46,479	47,484	48,284	51,762	54,798

Note: Federal only information is not available for 2018

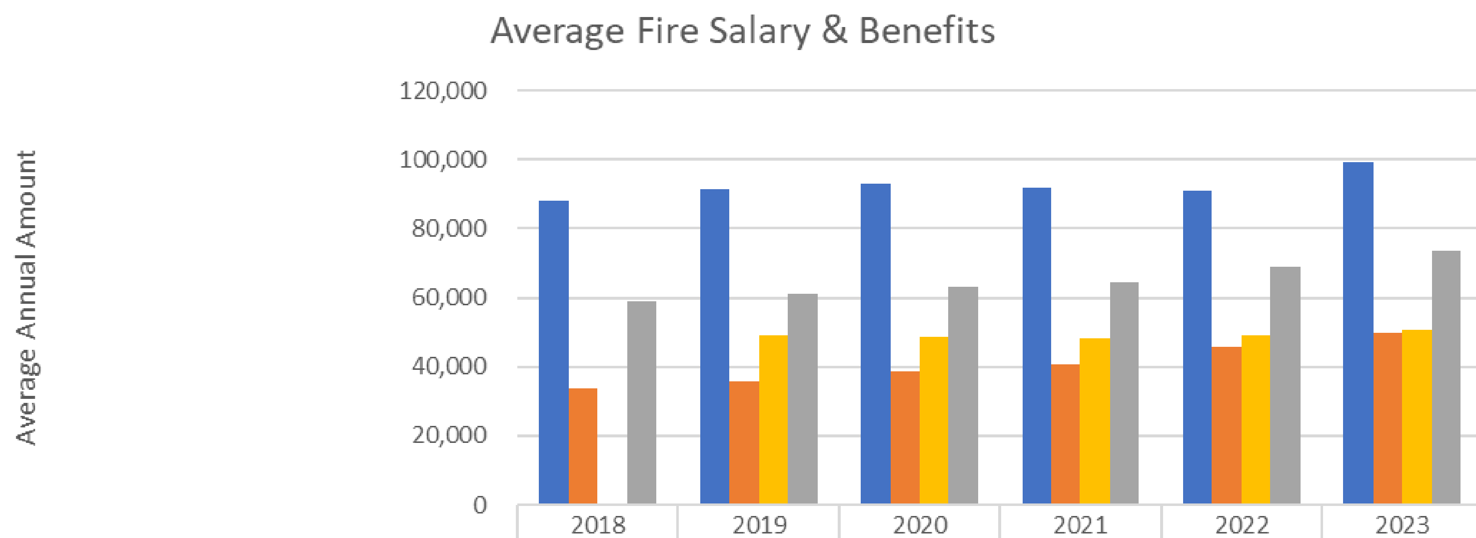
Average Police Salary & Benefits



	2018	2019	2020	2021	2022	2023
Average Annual Salary	83,342	91,904	94,943	95,213	95,488	107,312
Average Annual District Benefits	32,193	34,528	36,833	38,957	42,718	46,540
Average Annual Federal Benefits		42,794	42,500	42,058	43,805	45,710
Average Annual District + Federal Benefits	52,890	54,633	56,252	57,556	61,650	65,617

Note: Federal only information is not available for 2018

Average Fire Salary & Benefits



	2018	2019	2020	2021	2022	2023
Average Annual Salary	88,062	91,345	93,218	91,844	91,140	99,424
Average Annual District Benefits	33,430	35,856	38,753	40,796	45,703	49,646
Average Annual Federal Benefits		48,982	48,565	48,059	48,934	50,593
Average Annual District + Federal Benefits	58,828	60,978	62,946	64,397	69,093	73,499

Note: Federal only information is not available for 2018

B

Risk Assessments

- **What current or emerging factors could impact the plans?**

- **Investment returns – how much do year-to-year fluctuations matter?**
  - DCRB has a surplus to lower risk overall
  - Currently assets are about 33 times annual payouts
  - Risk is to impact on annual contribution requirement

- **Plan maturity – is plan influenced more by active member activity or retiree activity?**
  - Retiree liability is about 51% of total liability so no longer "Active Dominant"
  - Pay, turnover and retirement activity are key assumptions for actives

- **Plan is moving to become more mature**
  - Will put more pressure on investment returns
  - Lower support ratio (number of actives versus retirees)

B

Risk Assessments

- Asset Volatility Ratio (AVR): Market value of assets (MVA) divided by payroll

- A higher AVR implies that the plan is exposed to greater contribution volatility

Plan	2021	2022	2023
Teachers	4.9	4.2	4.1
Police & Fire	16.2	14.3	14.6

- The Teachers 4.1 ratio indicates a 1% deviation in asset return equals 4.1% of payroll. Based on the contribution policy, this is equal to 0.3% of pay.

- The Police & Fire 14.6 ratio indicates a 1% deviation in asset return equals 14.6% of payroll. Based on the contribution policy, this is equal to 1.1% of pay.

ASSET DRIVEN

B

Risk Assessments

- Liability Volatility Ratio (LVR): Actuarial Accrued Liability (AAL) divided by payroll
- A higher LVR implies that the plan is exposed to greater contribution volatility

Plan	2021	2022	2023
Teachers	4.5	4.7	4.6
Police & Fire	12.5	13.8	14.0

- The Teachers 4.6 ratio indicates a 1% deviation in asset return equals 4.6% of payroll. Based on the contribution policy, this is equal to 0.3% of pay.
- The Police & Fire 14.0 ratio indicates a 1% deviation in asset return equals 14.0% of payroll. Based on the contribution policy, this is equal to 1.0% of pay.

LIABILITY DRIVEN

B

Risk Assessments

- Pension plans evolve over time and so do the risks

- Low Default Risk Obligation Measure (LDROM) – newly required for the 2023 valuation
  – LDROM Measure = $13,790 M
  – Funding Policy Return Measure = $10,589 M

- Potential future reviews
  – Rate and magnitude of increasing benefit payouts
  – Stress testing future investment return scenarios
  – Change in risk metrics as the plans mature
  – Surplus management techniques

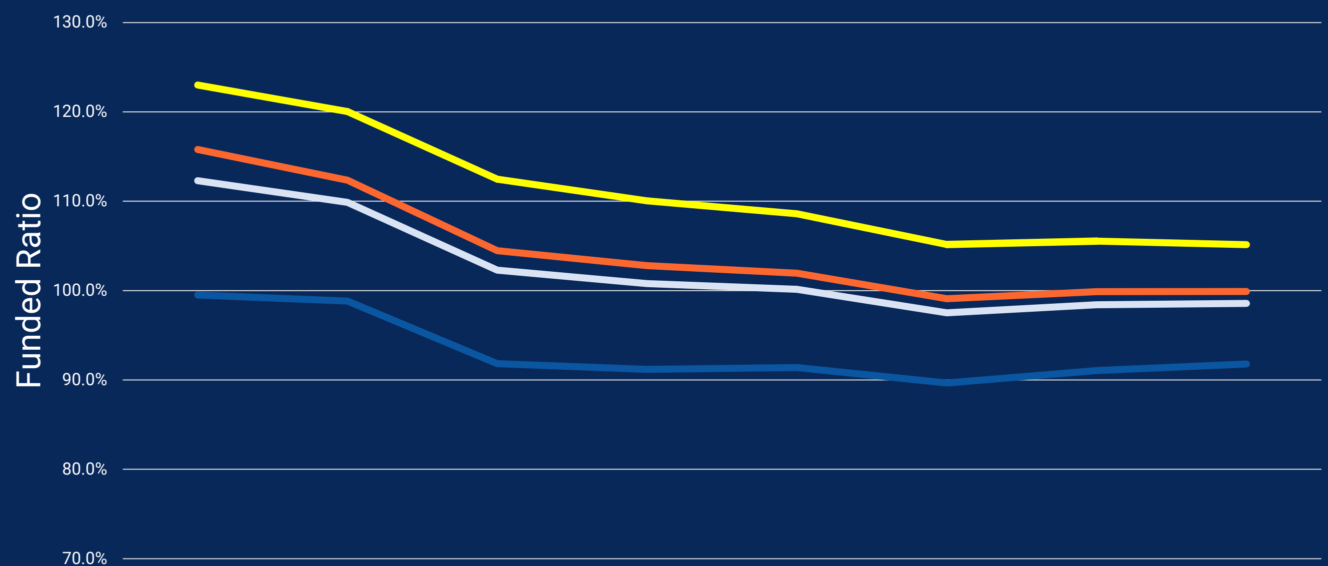
WHAT IS NEXT?

B

Projections

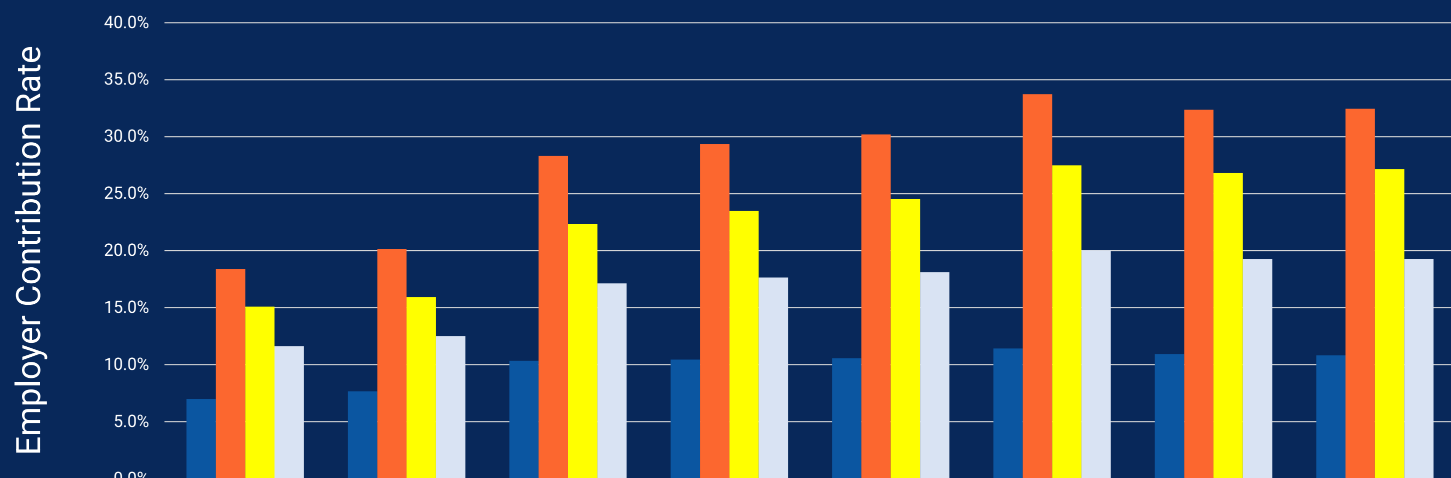
- Assume level population
- All assumptions are met annually except as described below
- Funding policy remains unchanged
- Outlook
  - Funded ratio expected to decrease for several years as 2022 asset losses are phased in
  - Contribution rate expected to increase for several years as 2022 asset losses phased in
- Future events that can impact projections
  - Higher pay (CBA driven)
  - Market movements
  - Inflation (short term versus long term)

Funded Status



	7/1/2021	7/1/2022	7/1/2023	7/1/2024	7/1/2025	7/1/2026	7/1/2027	7/1/2028
Teachers	99.5%	98.8%	91.8%	91.2%	91.4%	89.7%	91.1%	91.8%
Police	115.8%	112.3%	104.5%	102.8%	102.0%	99.1%	99.9%	99.9%
Fire	123.0%	120.0%	112.5%	110.0%	108.6%	105.2%	105.5%	105.1%
Total	112.3%	109.9%	102.3%	100.8%	100.1%	97.5%	98.4%	98.6%

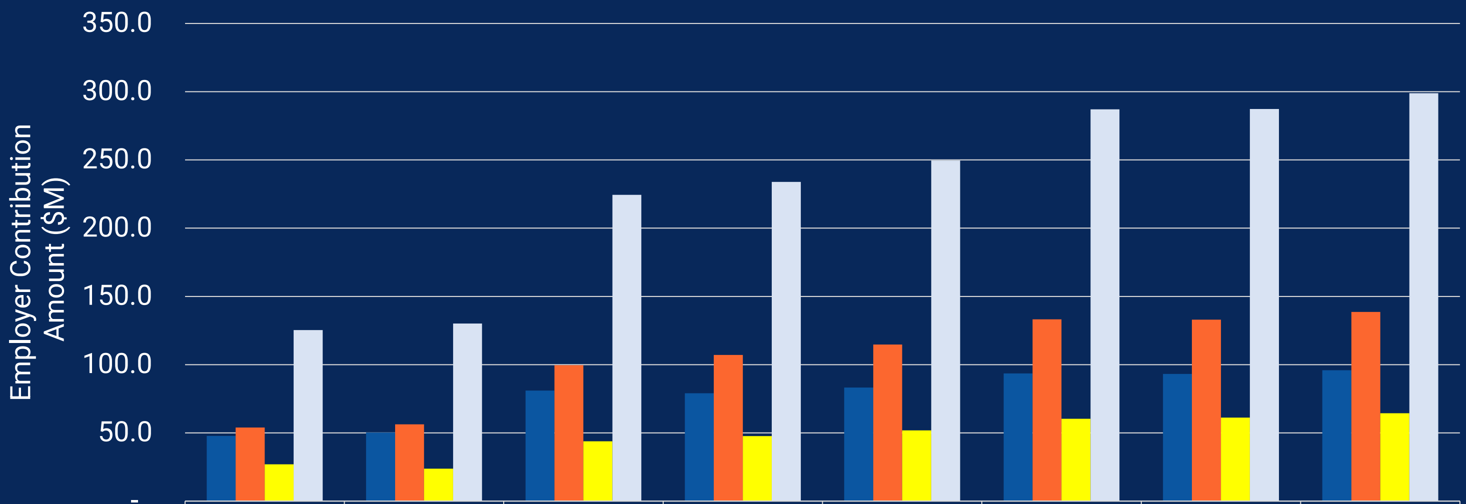
Employer Contribution Rate



	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Teachers	7.0%	7.7%	10.4%	10.4%	10.6%	11.4%	10.9%	10.8%
Police	18.4%	20.2%	28.3%	29.3%	30.2%	33.7%	32.4%	32.5%
Fire	15.1%	15.9%	22.3%	23.5%	24.5%	27.5%	26.8%	27.1%
Total	11.6%	12.5%	17.1%	17.7%	18.1%	20.0%	19.3%	19.3%

(% OF PAY)

Employer Contribution Amount



	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Teachers	47.8	50.2	81.0	79.1	83.2	93.6	93.2	95.9
Police	53.9	56.2	99.6	107.2	114.7	133.2	132.9	138.6
Fire	27.0	23.7	43.9	47.7	51.8	60.3	61.2	64.4
Total	125.3	130.1	224.4	233.9	249.6	287.1	287.3	299.0

($ MILLIONS)

Discussion

THANK YOU

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BoltonUSA.com

linkedin.com/company/boltonusa

Bolton

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Facsimile (202) 566-5000
E-mail: dcrb@dc.gov

DISTRICT OF COLUMBIA RETIREMENT BOARD

MOTION:

To accept and approve the Report on the Actuarial Valuations of the District of Columbia Teachers' Retirement Plan and the District of Columbia Police Officers and Firefighters' Retirement Plan, prepared as of October 1, 2023, for Fiscal Year ending 2025, presented to the Board by Bolton, Inc. on December 19, 2023.

PRESENTED TO THE BOARD ON DECEMBER 19, 2023.

District of Columbia Retirement Board Teachers' Retirement Plan and Police Officers and Firefighters' Retirement Plan

Actuarial Valuations as of October 1, 2023 to Determine the District's Contribution for the Fiscal Year Ending September 30, 2025

Bolton

Submitted by:

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Bolton
Employee Benefits, Actuarial & Investment Consulting

December 11, 2023

The Board of Trustees
District of Columbia Retirement Board
900 7th Street, NW, 2nd Floor
Washington, DC 20001

Re: District of Columbia Teachers' Retirement Plan and District of Columbia Police Officers and Firefighters' Retirement Plan Actuarial Valuations

Dear Trustees:

The following sets forth the actuarial valuations of the District of Columbia Teachers' Retirement Plan and the District of Columbia Police Officers and Firefighters' Retirement Plan (collectively referred to as the Plans) as of October 1, 2023. Section I of the report provides a summary, while Sections II through VI contain the development of the District's contribution for the 2025 fiscal year, along with a summary of the census and asset data, plan provisions, assumptions and actuarial methods. Section VII provides a glossary of many of the terms used in this report. The appendices of the report provide information on plan funding, solvency, a discussion of risk, adjustments to the actuarially determined contribution, gain and loss from experience, and valuation balance sheets for the DCRB Annual Comprehensive Financial Report (ACFR).

We are available to answer any questions on the material in this report or to provide explanations or further details, as appropriate. The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report. We are not aware of any direct or materially indirect financial interest or relationship, including investments or other services that could create a conflict of interest, which would impair the objectivity of our work.

Respectfully submitted,

Thomas Vicente, FSA, EA

Michelle L. Boyles, FSA, EA, MAAA

Ann M. Sturner, FSA, EA

Section I. Executive Summary

Background

Bolton Partners, Inc. has prepared the following report that sets forth the actuarial valuation of the District of Columbia Teachers' Retirement Plan (Teachers) and District of Columbia Police Officers and Firefighters' Retirement Plan (Police and Fire), collectively referred to as the Plans, as of October 1, 2023. Unless stated otherwise, the calculations reflected in this report are solely for the District-provided benefit and do not include the Federal portion of the benefit. Some demographic information includes a breakdown of District only, Federal only, and split annuitants.

Actuarially Determined Contributions (ADC)

The actuarially determined contribution (ADC) amount for all Plans increased as a dollar amount and as a percentage of payroll this year.

($ in Thousands)

Teachers, Police, and Fire	FY2023	FY2024	FY2025
ADC (before §1-907.02(c) adjustment)	$ 132,222	$ 142,433	$ 218,346
Total Payroll	1,136,998	1,138,337	1,274,322
Percent of Total Payroll	11.63%	12.51%	17.13%
ADC (after §1-907.02(c) adjustment)	$ 125,343	$ 130,107	$ 224,434

Teachers	FY2023	FY2024	FY2025
ADC (before §1-907.02(c) adjustment)	$ 43,913	$ 48,763	$ 75,360
Total Payroll	624,500	636,961	728,095
Percent of Total Payroll	7.03%	7.66%	10.35%
ADC (after §1-907.02(c) adjustment)	$ 47,835	$ 50,224	$ 80,981

Police and Fire Combined	FY2023	FY2024	FY2025
ADC (before §1-907.02(c) adjustment)	$ 88,309	$ 93,670	$ 142,986
Total Payroll	512,498	501,375	546,226
Percent of Total Payroll	17.23%	18.68%	26.18%
ADC (after §1-907.02(c) adjustment)	$ 77,508	$ 79,884	$ 143,454

Police	FY2023	FY2024	FY2025
ADC (before §1-907.02(c) adjustment)	$ 61,338	$ 65,713	$ 99,428
Total Payroll	333,307	325,927	351,108
Percent of Total Payroll	18.40%	20.16%	28.32%
ADC (after §1-907.02(c) adjustment)	$ 53,909	$ 56,190	$ 99,601

Fire	FY2023	FY2024	FY2025
ADC (before §1-907.02(c) adjustment)	$ 26,971	$ 27,957	$ 43,558
Total Payroll	179,191	175,448	195,118
Percent of Total Payroll	15.05%	15.93%	22.32%
ADC (after §1-907.02(c) adjustment)	$ 23,599	$ 23,693	$ 43,853

Section I. Executive Summary

The tables below compare the actuarial accrued liabilities of the plans and the assets of the plans for the current and prior valuation dates. In addition the liabilities are compared to the assets to determine the funded ratios of the plans.

Funding Measures – Teachers

Teachers	10/1/2022	10/1/2023	Percent Change
1. Actuarial Accrued Liability			
a. Active	$ 1,396,967	$ 1,662,948	19.04%
b. Retirees and Beneficiaries	1,235,162	1,305,420	5.69%
c. Inactive with Deferred Benefits	239,440	261,561	9.24%
d. Total	**$ 2,871,570**	**$ 3,229,928**	**12.48%**
2. Actuarial Value of Assets	$ 2,838,193	$ 2,966,048	4.50%
3. Plan Funded Ratio (2. / 1.d.)	98.84%	91.83%	
4. Market Value of Assets	$ 2,573,334	$ 2,884,320	12.08%
5. Funded Ratio based on Market Value of Assets (4. / 1.d.)	89.61%	89.30%	

($ in Thousands)

Funding Measures – Police and Fire

Police and Fire	10/1/2022	10/1/2023	Percent Change
1. Actuarial Accrued Liability			
a. Active	$ 2,932,991	$ 3,212,901	9.54%
b. Retirees and Beneficiaries	3,608,693	4,073,120	12.87%
c. Inactive with Deferred Benefits	97,440	72,675	(25.42%)
d. Total	**$ 6,639,124**	**$ 7,358,696**	**10.84%**
2. Actuarial Value of Assets	$ 7,612,268	$ 7,864,126	3.31%
3. Plan Funded Ratio (2. / 1.d.)	114.66%	106.87%	
4. Market Value of Assets	$ 6,901,545	$ 7,653,760	10.90%
5. Funded Ratio based on Market Value of Assets (4. / 1.d.)	103.95%	104.01%	

($ in Thousands)

Funding Measures – Police

Police		10/1/2022		10/1/2023	Percent Change
1. Actuarial Accrued Liability					
a. Active	$	1,911,590	$	2,093,547	9.52%
b. Retirees and Beneficiaries		2,663,456		3,003,059	12.75%
c. Inactive with Deferred Benefits		71,879		55,698	(22.51%)
d. Total	**$**	**4,646,924**	**$**	**5,152,305**	**10.88%**
2. Actuarial Value of Assets	$	5,220,802	$	5,382,785	3.10%
3. Plan Funded Ratio (2. / 1.d.)		112.35%		104.47%	
4. Market Value of Assets	$	4,733,562	$	5,238,509	10.67%
5. Funded Ratio based on Market Value of Assets (4. / 1.d.)		101.86%		101.67%	

($ in Thousands)

Funding Measures – Fire

Fire		10/1/2022		10/1/2023	Percent Change
1. Actuarial Accrued Liability					
a. Active	$	1,021,401	$	1,119,354	9.59%
b. Retirees and Beneficiaries		945,238		1,070,060	13.21%
c. Inactive with Deferred Benefits		25,561		16,977	(33.58%)
d. Total	**$**	**1,992,199**	**$**	**2,206,391**	**10.75%**
2. Actuarial Value of Assets	$	2,391,466	$	2,481,341	3.76%
3. Plan Funded Ratio (2. / 1.d.)		120.04%		112.46%	
4. Market Value of Assets	$	2,167,983	$	2,415,251	11.41%
5. Funded Ratio based on Market Value of Assets (4. / 1.d.)		108.82%		109.47%	

($ in Thousands)

Risk Measures

The primary risk that a plan sponsor incurs from a defined benefit plan is the risk of substantial increases in annual contributions. Many variables can influence future results and the sensitivity of the ADC will vary from plan to plan. As part of the annual valuation, we monitor commonly used measures of the relative riskiness of a pension plan, relative to the plan sponsor and the employee group covered by the plan. A brief review of the risk metrics and a discussion of key risks are shown in Appendix 3. Additional detailed or focused assessment of risks is outside the scope of the actuarial valuation but can be conducted as a separate assignment.

Experience Analysis

The following factors affected the District's contribution, as a percentage of payroll:

- Investment returns during FY2023 were about $156.4 million greater than expected for Teachers and $429.8 million greater than expected for Police and Fire. A portion of that gain is reflected in this valuation, with the remaining portions to be reflected in future valuations. The gain was offset by the continued recognition of prior investment gains and losses. There is a total of $81.7 million in net deferred investment losses for Teachers and $210.4 million in net deferred investments losses for Police and Fire as of October 1, 2023 that will be reflected in future valuations. These deferrals produce an overall experience loss on investment income.
- Retiree COLAs in FY2023 were more than the assumed annual increases.
- The average participant pay increased by 12.8% for Teachers, 12.4% for Police, and 9.1% for Fire. This was primarily as a result of collective bargaining agreements.
- Total participant payroll amount increased by 14.3% for Teachers and 8.9% for Police and Fire over the prior year; the assumption is 4.0% growth per year. This was primarily as a result of collective bargaining agreements.

Changes in Method, Assumptions, and Plan Amendments

There were no plan provision changes, other than an update to the child survivor benefits which are annually adjusted for inflation. No method or assumption changes.

Impact of COVID-19

Because the long-term net impact of COVID-19 on mortality, salary increases, and changes in turnover and retirement behavior is not possible to estimate at this time, we have made no adjustments to any of the assumptions.

Sources of Information

Membership data as of July 1, 2023, and market value of assets as of October 1, 2023 were provided by or at the direction of the District of Columbia Retirement Board. While we have reviewed this data for consistency and completeness, we have not audited this data. For valuation purposes, members were treated as remaining in the Plans as of October 1, 2023.

Section II. Actuarial Certification

This actuarial valuation sets forth our calculation of an estimate of the liabilities of the District of Columbia Teachers' Retirement Plan and the District of Columbia Police Officers and Firefighters' Retirement Plan, together with a comparison of these liabilities with the value of the plan assets, as submitted by the District of Columbia Retirement Board (the Board). These calculations, and comparisons with assets, are applicable for the valuation date only. The future is uncertain, and the Plans may become better funded or more poorly funded in the future. This valuation does not provide any guarantee that the Plans will be able to provide the promised benefits in the future.

This report was prepared for the internal use of the Board and its auditors in connection with our actuarial valuations of the pension plan. The purpose of this report is to provide the recommended employer contribution for the 2025 fiscal year. It is neither intended nor necessarily suitable for other purposes. Bolton is not responsible for the consequences of any other use or the reliance upon this report by any other party.

This report is based on plan provisions, census data, and asset data submitted by the Board. We have relied on this information for purposes of preparing this report. We have not audited the census or asset data provided, however based on our review the data appears to be reasonable and consistent with previously provided information. Unless otherwise noted in our report, we believe the information provided is sufficiently complete and reliable for purposes of the results presented in this report. The accuracy of the results presented in this report is dependent upon the accuracy and completeness of the underlying information. The Board is solely responsible for the validity and completeness of this information.

The Board is responsible for selecting the plan's funding policy, actuarial valuation methods, asset valuation methods, and assumptions. The policies, methods and assumptions used in this valuation are those that have been so prescribed and are described in this report. The Board is solely responsible for communicating to Bolton any changes required thereto.

The Board is solely responsible for selecting the plan's investment policies, asset allocations and individual investments. Bolton's actuaries have not provided any investment advice to the Board.

This is a deterministic valuation in that it is based on a single set of assumptions. This set of assumptions is one possible basis for our calculations. We may consider that some factors are not material to the valuation of the plan and may not provide a specific assumption for those factors. We may have used other assumptions in the past. We will likely consider changes in assumptions at a future date.

Different assumptions or scenarios within the range of possibilities may also be reasonable and results based on those assumptions would be different. As a result of the uncertainty inherent in a forward-looking projection over a very long period of time, no one projection is uniquely "correct" and many alternative projections of the future could also be regarded as reasonable. Two different actuaries could, quite reasonably, arrive at different results based on the same data and different views of the future.

The Board could reasonably ask how the valuation would change if we used a different assumption set or if plan experience exhibited variations from our assumptions. This report does not contain such an analysis. That type of analysis would be a separate assignment.

In addition, decisions regarding benefit improvements, benefit changes, the trust's investment policy, and similar issues should not be based on this valuation. These issues are complex and other factors should be considered when making such decisions. Other factors might include the anticipated vitality of the local economy and future growth expectations, as well as other economic and financial factors.

The cost of this plan is determined by the benefits promised by the plan, the plan's participant population, the investment experience of the plan and many other factors. An actuarial valuation is a budgeting tool for the Board. It does not affect the cost of the plan. Different funding methods provide for different timing of contributions to the plan. As the experience of the plan evolves, it is normal for the level of contributions to the plan to change. If a contribution is not made for a particular year, either by deliberate choice or because of an error in a calculation, that contribution can be made in later years. We are not responsible for the consequences of any decision by the Board to make contributions at a future time rather than an earlier time. The Board is responsible for funding the cost of the plan.

The report is conditioned on the assumption of an ongoing plan and is not meant to present the actuarial position of the plan in the case of plan termination. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions, changes in economic or demographic assumptions, 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 or additional cost or contribution requirements based on the plan's funded status), and changes in plan provisions or applicable law.

The valuation was completed using both proprietary and third-party models (including software and tools). We have tested these models to ensure they are used for their intended purposes, within their known limitations, and without any known material inconsistencies unless otherwise stated.

The calculations in this report have been computed in accordance with our understanding of generally accepted actuarial principles and practices and fairly reflect the actuarial position of the plan. The various actuarial assumptions and methods which have been used are, in our opinion, appropriate for the purposes of this report.

We make every effort to ensure that our calculations are accurately performed. We reserve the right to correct any potential errors by amending the results of this report or by including the corrections in a future valuation report.

Bolton does not practice law and, therefore, cannot and does not provide legal advice. Any statutory interpretation on which this report is based reflects Bolton's understanding as an actuarial firm. Bolton recommends that recipients of this report consult with legal counsel when making any decisions regarding compliance with ERISA, the Internal Revenue Code, or any other statute or regulation.

The Board should notify Bolton promptly after receipt of this report if the Board disagrees with anything contained in the report or is aware of any information that would affect the results of the report that has not been communicated to Bolton or incorporated herein. The report will be deemed final and acceptable to the Board unless the Board promptly provides such notice to Bolton.

The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. We are not aware of any direct or material indirect financial interest or relationship, including investments or other services, which could create a conflict of interest that would impair the objectivity of our work.

We are available to answer any questions on the material in this report to provide explanations or further details as appropriate.

Thomas Vicente

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Section III. Determination of District Contributions

Derivation of Liabilities – Teachers

Below is a summary of the actuarial accrued liability of the future benefits expected to be paid from the Plan.

Teachers	10/1/2022	10/1/2023
1. Participants		
a. Active	6,088	6,171
b. Retirees and Beneficiaries	4,065	4,066
i. Service Retirements	3,762	3,761
ii. Disability Retirements	102	95
iii. Survivors	201	210
c. Inactive with Deferred Benefits	1,718	1,844
d. Total	**11,871**	**12,081**
2. Active Payroll	$ 612,463	$ 700,092
3. Actuarial Accrued Liability		
a. Active Participants	$ 1,396,967	$ 1,662,948
b. Retirees and Beneficiaries	1,235,162	1,305,420
i. Service Retirements	1,178,659	1,248,305
ii. Disability Retirements	34,459	33,544
iii. Survivors	22,044	23,571
c. Inactive with Deferred Benefits	239,440	261,561
d. Total	**2,871,570**	**3,229,928**
4. Actuarial Value of Assets	$ 2,838,193	$ 2,966,048
5. Unfunded Actuarial Liability (3.d.- 4.)	33,376	263,880
6. Funded Ratio (4. ÷ 3.d.)	98.84%	91.83%

($ in Thousands)

Derivation of Liabilities – Police and Fire

Below is a summary of the actuarial accrued liability of the future benefits expected to be paid from the Plan.

Police and Fire	10/1/2022	10/1/2023
1. Participants		
a. Active	5,133	5,033
b. Retirees and Beneficiaries	4,373	4,585
i. Service Retirements	3,331	3,508
ii. Disability Retirements	436	452
iii. Survivors	606	625
c. Inactive with Deferred Benefits	356	351
d. Total	**9,862**	**9,969**
2. Active Payroll	$ 482,092	$ 525,218
3. Actuarial Accrued Liability		
a. Active Participants	$ 2,932,991	$ 3,212,901
b. Retirees and Beneficiaries	3,608,693	4,073,120
i. Service Retirements	3,140,881	3,566,173
ii. Disability Retirements	263,258	286,680
iii. Survivors	204,554	220,266
c. Inactive with Deferred Benefits	97,440	72,675
d. Total	**6,639,124**	**7,358,696**
4. Actuarial Value of Assets	$ 7,612,268	$ 7,864,126
5. Unfunded Actuarial Liability (3.d.- 4.)	(973,145)	(505,430)
6. Funded Ratio (4. ÷ 3.d.)	114.66%	106.87%

($ in Thousands)

Derivation of Liabilities – Police

Below is a summary of the actuarial accrued liability of the future benefits expected to be paid from the Plan.

Police		10/1/2022		10/1/2023
1. Participants				
a. Active		3,282		3,146
b. Retirees and Beneficiaries		3,251		3,405
i. Service Retirements		2,478		2,607
ii. Disability Retirements		335		345
iii. Survivors		438		453
c. Inactive with Deferred Benefits		258		260
d. Total		**6,791**		**6,811**
2. Active Payroll	$	313,391	$	337,604
3. Actuarial Accrued Liability				
a. Active Participants	$	1,911,590	$	2,093,547
b. Retirees and Beneficiaries		2,663,456		3,003,059
i. Service Retirements		2,326,257		2,638,260
ii. Disability Retirements		201,655		218,090
iii. Survivors		135,544		146,709
c. Inactive with Deferred Benefits		71,879		55,698
d. Total		**4,646,924**		**5,152,305**
4. Actuarial Value of Assets	$	5,220,802	$	5,382,785
5. Unfunded Actuarial Liability (3.d.- 4.)		(573,878)		(230,480)
6. Funded Ratio (4. ÷ 3.d.)		112.35%		104.47%

($ in Thousands)

Derivation of Liabilities – Fire

Below is a summary of the actuarial accrued liability of the future benefits expected to be paid from the Plan.

Fire			10/1/2022	10/1/2023
1.	Participants			
	a.	Active	1,851	1,887
	b.	Retirees and Beneficiaries	1,122	1,180
		i. Service Retirements	853	901
		ii. Disability Retirements	101	107
		iii. Survivors	168	172
	c.	Inactive with Deferred Benefits	98	91
	d.	**Total**	**3,071**	**3,158**
2.	Active Payroll		$ 168,700	$ 187,614
3.	Actuarial Accrued Liability			
	a.	Active Participants	$ 1,021,401	$ 1,119,354
	b.	Retirees and Beneficiaries	945,238	1,070,060
		i. Service Retirements	814,624	927,913
		ii. Disability Retirements	61,604	68,590
		iii. Survivors	69,010	73,557
	c.	Inactive with Deferred Benefits	25,561	16,977
	d.	**Total**	**1,992,199**	**2,206,391**
4.	Actuarial Value of Assets		$ 2,391,466	$ 2,481,341
5.	Unfunded Actuarial Liability (3.d.- 4.)		(399,267)	(274,950)
6.	Funded Ratio (4. ÷ 3.d.)		120.04%	112.46%

($ in Thousands)

Experience Gain/(Loss) and Projection of Unfunded Liability – Teachers

The experience gain/(loss) from October 1, 2022 to October 1, 2023 and projection of the unfunded actuarial liability from October 1, 2023 to October 1, 2024, the beginning of the fiscal year, is shown below. Please see Appendix 5 for a detailed breakdown of gain/(loss) sources.

	Experience Gain/(Loss) - Teachers		10/1/2023
1.	Unfunded Liability as of 10/01/2022	$	33,376
2.	Total FY2023 Normal Cost		85,056
3.	Actual FY2023 Expenses		4,880
4.	Total FY2023 Actual Contributions		106,526
5.	Interest		4,274
6.	Expected Unfunded Liability as of 10/01/2023		21,060
7.	Change due to Plan Amendments		0
8.	Change due to Assumptions and/or Methods		0
9.	Expected Unfunded Liability as of 10/01/2023		21,060
10.	Actual Unfunded Liability as of 10/01/2023		263,880
11.	Gain/(Loss)		(242,820)

	Projected Unfunded Liability - Teachers		
1.	Actual Unfunded Liability as of 10/01/2023	$	263,880
2.	Total Normal Cost FY2024		96,040
3.	Expected District and Employee Contributions FY2024		108,114
4.	Expected Expenses FY2024		8,793
5.	Interest		19,438
6.	Projected Unfunded Liability as of 10/01/2024	$	280,038

($ in Thousands)

Experience Gain/(Loss) and Projection of Unfunded Liability – Police

The experience gain/(loss) from October 1, 2022 to October 1, 2023 and projection of the unfunded actuarial liability from October 1, 2023 to October 1, 2024, the beginning of the fiscal year, is shown below. Please see Appendix 5 for a detailed breakdown of gain/(loss) sources.

	Experience Gain/(Loss) - Police		10/1/2023
1.	Unfunded Liability as of 10/01/2022	$	(573,878)
2.	Total FY2023 Normal Cost		120,079
3.	Actual FY2023 Expenses		9,935
4.	Total FY2023 Actual Contributions		82,674
5.	Interest		(30,601)
6.	Expected Unfunded Liability as of 10/01/2023		(557,139)
7.	Change due to Plan Amendments		0
8.	Change due to Assumptions and/or Methods		0
9.	Expected Unfunded Liability as of 10/01/2023		(557,139)
10.	Actual Unfunded Liability as of 10/01/2023		(230,480)
11.	Gain/(Loss)		(326,658)

	Projected Unfunded Liability - Police		
1.	Actual Unfunded Liability as of 10/01/2023	$	(230,480)
2.	Total Normal Cost FY2024		128,235
3.	Expected District and Employee Contributions FY2024		83,656
4.	Expected Expenses FY2024		7,301
5.	Interest		(8,740)
6.	Projected Unfunded Liability as of 10/01/2024	$	(187,340)

($ in Thousands)

Experience Gain/(Loss) and Projection of Unfunded Liability – Fire

The experience gain/(loss) from October 1, 2022 to October 1, 2023 and projection of the unfunded actuarial liability from October 1, 2023 to October 1, 2024, the beginning of the fiscal year, is shown below. Please see Appendix 5 for a detailed breakdown of gain/(loss) sources.

	Experience Gain/(Loss) - Fire		10/1/2023
1.	Unfunded Liability as of 10/01/2022	$	(399,267)
2.	Total FY2023 Normal Cost		63,846
3.	Actual FY2023 Expenses		4,581
4.	Total FY2023 Actual Contributions		39,083
5.	Interest		(22,026)
6.	Expected Unfunded Liability as of 10/01/2023		(391,950)
7.	Change due to Plan Amendments		0
8.	Change due to Assumptions and/or Methods		0
9.	Expected Unfunded Liability as of 10/01/2023		(391,950)
10.	Actual Unfunded Liability as of 10/01/2023		(274,950)
11.	Gain/(Loss)		(116,999)

	Projected Unfunded Liability - Fire		
1.	Actual Unfunded Liability as of 10/01/2023	$	(274,950)
2.	Total Normal Cost FY2024		70,379
3.	Expected District and Employee Contributions FY2024		38,578
4.	Expected Expenses FY2024		3,957
5.	Interest		(13,851)
6.	Projected Unfunded Liability as of 10/01/2024	$	(253,044)

($ in Thousands)

Development of District Contributions – Teachers

The breakdown of the Actuarially Determined Contribution into normal cost, amortization payment, expected administrative expenses, and D.C. Code §1-907.02(c) Adjustment is illustrated below. The calculation of the D.C. Code §1-907.02(c) Adjustment is detailed in Appendix 4.

Teachers Actuarially Determined Contribution (ADC)		FY2025	Percentage of FY2025 Payroll
1. Total Normal Cost as of October 1, 2023	$	96,040	N/A
2. Projected Total Normal Cost as of October 1, 2024 (1. x 1.04)		99,895	13.72%
3. Expected Member Contributions		57,520	7.90%
4. Employer Normal Cost (2. - 3.)		42,375	5.82%
5. Expenses		8,737	1.20%
6. Amortization Payment		24,247	3.33%
7. Actuarially Determined Contribution (ADC) (4. + 5. + 6.)		75,360	10.35%
8. D.C. Code §1-907.02(c) Adjustment to FY2025 Payment		5,621	N/A
9. Fiscal Year District Payment	$	80,981	N/A

Projected Payroll		
1. Active Member June 30, 2023 Payroll	$	661,828
2. Expected FY2024 Payroll (1. increased with one year of salary scale)		700,092
3. Projected FY2025 Payroll (2. x 1.04)	$	728,095

($ in Thousands)

Development of District Contributions – Police and Fire

The breakdown of the Actuarially Determined Contribution into normal cost, amortization payment, expected administrative expenses, and D.C. Code §1-907.02(c) Adjustment is illustrated below. The calculation of the D.C. Code §1-907.02(c) Adjustment is detailed in Appendix 4.

Police and Fire Actuarially Determined Contribution (ADC)		FY2025	Percentage of FY2025 Payroll
1. Total Normal Cost as of October 1, 2023	$	198,614	N/A
2. Projected Total Normal Cost as of October 1, 2024 (1. x 1.04)		206,540	37.82%
3. Expected Member Contributions		43,152	7.90%
4. Employer Normal Cost (2. - 3.)		163,387	29.92%
5. Expenses		11,470	2.10%
6. Amortization Payment		(31,873)	(5.84%)
7. Actuarially Determined Contribution (ADC) (4. + 5. + 6.)		142,986	26.18%
8. D.C. Code §1-907.02(c) Adjustment to FY2025 Payment		468	N/A
9. Fiscal Year District Payment	$	143,454	N/A

Projected Payroll		
1. Active Member June 30, 2023 Payroll	$	495,009
2. Expected FY2024 Payroll (1. increased with one year of salary scale)		525,218
3. Projected FY2025 Payroll (2. x 1.04)	$	546,226

($ in Thousands)

Development of District Contributions – Police

The breakdown of the Actuarially Determined Contribution into normal cost, amortization payment, expected administrative expenses, and D.C. Code §1-907.02(c) Adjustment is illustrated below. The calculation of the D.C. Code §1-907.02(c) Adjustment is detailed in Appendix 4.

Police Actuarially Determined Contribution (ADC)		FY2025	Percentage of FY2025 Payroll
1.	Total Normal Cost as of October 1, 2023	$ 128,235	N/A
2.	Projected Total Normal Cost as of October 1, 2024 (1. x 1.04)	133,351	37.98%
3.	Expected Member Contributions	27,738	7.90%
4.	Employer Normal Cost (2. - 3.)	105,613	30.08%
5.	Expenses	7,373	2.10%
6.	Amortization Payment	(13,559)	(3.86%)
7.	Actuarially Determined Contribution (ADC) (4. + 5. + 6.)	99,428	28.32%
8.	D.C. Code §1-907.02(c) Adjustment to FY2025 Payment	173	N/A
9.	Fiscal Year District Payment	$ 99,601	N/A

Projected Payroll		
1.	Active Member June 30, 2023 Payroll	$ 317,268
2.	Expected FY2024 Payroll (1. increased with one year of salary scale)	337,604
3.	Projected FY2025 Payroll (2. x 1.04)	$ 351,108

($ in Thousands)

Development of District Contributions – Fire

The breakdown of the Actuarially Determined Contribution into normal cost, amortization payment, expected administrative expenses, and D.C. Code §1-907.02(c) Adjustment is illustrated below. The calculation of the D.C. Code §1-907.02(c) Adjustment is detailed in Appendix 4.

Fire Actuarially Determined Contribution (ADC)		FY2025	Percentage of FY2025 Payroll
1.	Total Normal Cost as of October 1, 2023	$ 70,379	N/A
2.	Projected Total Normal Cost as of October 1, 2024 (1. x 1.04)	73,189	37.51%
3.	Expected Member Contributions	15,414	7.90%
4.	Employer Normal Cost (2. - 3.)	57,774	29.61%
5.	Expenses	4,097	2.10%
6.	Amortization Payment	(18,314)	(9.39%)
7.	Actuarially Determined Contribution (ADC) (4. + 5. + 6.)	43,558	22.32%
8.	D.C. Code §1-907.02(c) Adjustment to FY2025 Payment	295	N/A
9.	Fiscal Year District Payment	$ 43,853	N/A

Projected Payroll		
1.	Active Member June 30, 2023 Payroll	$ 177,741
2.	Expected FY2024 Payroll (1. increased with one year of salary scale)	187,614
3.	Projected FY2025 Payroll (2. x 1.04)	$ 195,118

($ in Thousands)

Schedule of Amortization Bases

Below is a schedule of the amortization bases as of October 1, 2024.

Teachers Description	Date Established	Remaining Years	Amount to be Amortized	Payment / (Credit)
Actuarial (Gain)/Loss	10/1/2023	19	33,447	2,965
Actuarial (Gain)/Loss	10/1/2024	20	246,591	21,282
Totals			**$ 280,038**	**$ 24,247**

Police Description	Date Established	Remaining Years	Amount to be Amortized	Payment / (Credit)
Surplus	10/1/2024	30	(187,340)	(13,559)
Totals			**$ (187,340)**	**$ (13,559)**

Fire Description	Date Established	Remaining Years	Amount to be Amortized	Payment / (Credit)
Surplus	10/1/2024	30	(253,044)	(18,314)
Totals			**$ (253,044)**	**$ (18,314)**

($ in Thousands)

Bases are amortized on a level dollar basis, assuming mid-year payments.

The unfunded liability at 10/1/2023 is projected to 10/1/2024 for the amortization of the surplus.

Section IV. Valuation of Assets

Reconciliation of Assets – Teachers

Below is a reconciliation of assets from October 1, 2021 through September 30, 2023. An adjustment has been included to account for the difference in market value of assets between the prior year's valuation report and the audited value.

Teachers		FY2022		FY2023
1. Beginning of Year Assets	$	2,934,307,000	$	2,573,334,000
2. Adjustments		10,577,000		(409,000)
3. Beginning of Year Assets after Adjustments		2,944,884,000		2,572,925,000
4. Receipts				
a. Employer Contributions		75,060,000		47,835,000
b. Employee Contributions		46,914,000		58,691,438
c. Net Investment Income		(388,520,000)		317,037,084
d. Total Receipts	**$**	**(266,546,000)**	**$**	**423,563,522**
5. Deductions				
a. Benefit Payments	$	(95,352,000)	$	(101,598,605)
b. Refunds		(5,236,000)		(5,689,368)
c. Administrative Expenses		(4,416,000)		(4,880,104)
d. Total Deductions	**$**	**(105,004,000)**	**$**	**(112,168,077)**
6. Net Increase		(371,550,000)		311,395,445
7. End of Year Assets	$	2,573,334,000	$	2,884,320,445
8. Rate of Return (2 x 4.c.) / (1. + 7. – 4.c.)		-13.16%		12.34%

Reconciliation of Assets – Police and Fire

Below is a reconciliation of assets from October 1, 2021 through September 30, 2023. An adjustment has been included to account for the difference in market value of assets between the prior year's valuation report and the audited value.

	Police and Fire		FY2022		FY2023
1.	Beginning of Year Assets	$	7,963,277,000	$	6,901,545,000
2.	Adjustments		28,717,000		(1,100,000)
3.	Beginning of Year Assets after Adjustments		7,991,994,000		6,900,445,000
4.	Receipts				
	a. Employer Contributions	$	108,965,000	$	77,508,000
	b. Employee Contributions		36,997,000		44,249,129
	c. Net Investment Income		(1,042,397,000)		857,808,203
	d. Total Receipts	**$**	**(896,435,000)**	**$**	**979,565,332**
5.	Deductions				
	a. Benefit Payments	$	(179,984,000)	$	(209,584,923)
	b. Refunds		(2,177,000)		(2,149,216)
	c. Administrative Expenses		(11,853,000)		(14,516,078)
	d. Total Deductions	**$**	**(194,014,000)**	**$**	**(226,250,217)**
6.	Net Increase		(1,090,449,000)		753,315,115
7.	End of Year Assets	$	6,901,545,000	$	7,653,760,115
8.	Rate of Return		-13.08%		12.53%
	(2 x 4.c.) / (1. + 7. – 4.c.)				

Reconciliation of Assets – Police

Below is a reconciliation of assets from October 1, 2021 through September 30, 2023. An adjustment has been included to account for the difference in market value of assets between the prior year's valuation report and the audited value.

Police		FY2022		FY2023
1. Beginning of Year Assets	$	5,478,977,416	$	4,733,562,435
2. Adjustments		19,758,172		(754,457)
3. Beginning of Year Assets after Adjustments		5,498,735,588		4,732,807,978
4. Receipts				
a. Employer Contributions	$	68,034,000	$	53,909,000
b. Employee Contributions		24,184,939		28,764,840
c. Net Investment Income		(716,157,306)		587,698,026
d. Total Receipts	**$**	**(623,938,367)**	**$**	**670,371,866**
5. Deductions				
a. Benefit Payments	$	(131,514,309)	$	(153,164,662)
b. Refunds		(1,590,734)		(1,570,647)
c. Administrative Expenses		(8,129,743)		(9,935,400)
d. Total Deductions	**$**	**(141,234,786)**	**$**	**(164,670,709)**
6. Net Increase		(765,173,153)		505,701,157
7. End of Year Assets	$	4,733,562,435	$	5,238,509,135
8. Rate of Return		-13.08%		12.53%
(2 x 4.c.) / (1. + 7. – 4.c.)				

Reconciliation of Assets – Fire

Below is a reconciliation of assets from October 1, 2021 through September 30, 2023. An adjustment has been included to account for the difference in market value of assets between the prior year's valuation report and the audited value.

Fire			FY2022		FY2023
1.	Beginning of Year Assets	$	2,484,299,584	$	2,167,982,565
2.	Adjustments		8,958,828		(345,543)
3.	Beginning of Year Assets after Adjustments		2,493,258,412		2,167,637,022
4.	Receipts				
	a. Employer Contributions	$	40,931,000	$	23,599,000
	b. Employee Contributions		12,812,061		15,484,289
	c. Net Investment Income		(326,239,694)		270,110,177
	d. Total Receipts	**$**	**(272,496,633)**	**$**	**309,193,466**
5.	Deductions				
	a. Benefit Payments	$	(48,469,691)	$	(56,420,261)
	b. Refunds		(586,266)		(578,569)
	c. Administrative Expenses		(3,723,257)		(4,580,678)
	d. Total Deductions	**$**	**(52,779,214)**	**$**	**(61,579,508)**
6.	Net Increase		(325,275,847)		247,613,958
7.	End of Year Assets	$	2,167,982,565	$	2,415,250,980
8.	Rate of Return		-13.08%		12.53%
	(2 x 4.c.) / (1. + 7. – 4.c.)				

Calculation of Actuarial Value of Assets – Teachers

The actuarial asset value as of October 1, 2023 is determined by spreading the asset gain or loss for each year over a five-year period. The asset gain or loss is the amount by which the actual asset return differs from the expected asset return.

	Teachers		10/1/2023
1.	Market Value of Assets at End of Year	$	2,884,320,445
2.	Net investment income		317,037,084
3.	Expected Return Rate as of 09/30/2023		6.25%
4.	Expected investment income		160,631,511
5.	Gain/(Loss)		156,405,573

Spreading of investment gain/(loss)

Year		Original or restructured base	% Deferred		Deferred
FY2023	$	156,405,573	80%	$	125,124,458
FY2022		(573,105,563)	60%		(343,863,338)
FY2021		346,333,033	40%		138,533,213
FY2020		(7,610,383)	20%		(1,522,077)
FY2019		(55,652,385)	0%		-
			Total deferred		**(81,727,744)**

6.	Preliminary Actuarial Value of Assets	$	2,966,048,189
7.	Lower Corridor		2,307,456,356
8.	Upper Corridor		3,461,184,534
9.	Final Actuarial Value of Assets		2,966,048,189

Rate of Return	4.71%

Calculation of Actuarial Value of Assets – Police and Fire

The actuarial asset value as of October 1, 2023 is determined by spreading the asset gain or loss for each year over a five-year period. The asset gain or loss is the amount by which the actual asset return differs from the expected asset return.

	Police and Fire		10/1/2023
1.	Market Value of Assets at End of Year	$	7,653,760,115
2.	Net investment income		857,808,203
3.	Expected Return Rate as of 09/30/2023		6.25%
4.	Expected investment income		428,012,404
5.	Gain/(Loss)		429,795,799

Spreading of investment gain/(loss)

Year		Original or restructured base	% Deferred		Deferred
FY2023	$	429,795,799	80%	$	343,836,639
FY2022		(1,540,395,000)	60%		(924,237,000)
FY2021		936,229,953	40%		374,491,981
FY2020		(22,287,348)	20%		(4,457,470)
FY2019		(156,151,165)	0%		-
			Total deferred		**(210,365,850)**

6.	Preliminary Actuarial Value of Assets	$	7,864,125,965
7.	Lower Corridor		6,123,008,092
8.	Upper Corridor		9,184,512,138
9.	Final Actuarial Value of Assets		7,864,125,965

Rate of Return	4.71%

Calculation of Actuarial Value of Assets – Police

The actuarial asset value as of October 1, 2023 is determined by spreading the asset gain or loss for each year over a five-year period. The asset gain or loss is the amount by which the actual asset return differs from the expected asset return.

	Police		10/1/2023
1.	Market Value of Assets at End of Year	$	5,238,509,135
2.	Net investment income		587,698,026
3.	Expected Return Rate as of 09/30/2023		6.25%
4.	Expected investment income		293,238,096
5.	Gain/(Loss)		294,459,930

Spreading of investment gain/(loss)

Year		Original or restructured base	% Deferred		Deferred
FY2023	$	294,459,930	80%	$	235,567,944
FY2022		(1,058,296,535)	60%		(634,977,921)
FY2021		645,561,662	40%		258,224,665
FY2020		(15,451,823)	20%		(3,090,365)
FY2019		(108,792,993)	0%		-
			Total deferred		**(144,275,677)**

6.	Preliminary Actuarial Value of Assets	$	5,382,784,812
7.	Lower Corridor		4,190,807,308
8.	Upper Corridor		6,286,210,962
9.	Final Actuarial Value of Assets		5,382,784,812

Rate of Return	4.71%

Calculation of Actuarial Value of Assets – Fire

The actuarial asset value as of October 1, 2023 is determined by spreading the asset gain or loss for each year over a five-year period. The asset gain or loss is the amount by which the actual asset return differs from the expected asset return.

Fire		10/1/2023
1.	Market Value of Assets at End of Year	$ 2,415,250,980
2.	Net investment income	270,110,177
3.	Expected Return Rate as of 09/30/2023	6.25%
4.	Expected investment income	134,774,307
5.	Gain/(Loss)	135,335,870

Spreading of investment gain/(loss)

Year	Original or restructured base	% Deferred	Deferred
FY2023	$ 135,335,870	80%	$ 108,268,696
FY2022	(482,098,465)	60%	(289,259,079)
FY2021	290,668,291	40%	116,267,316
FY2020	(6,835,525)	20%	(1,367,105)
FY2019	(47,358,172)	0%	-
		Total deferred	**(66,090,172)**

6.	Preliminary Actuarial Value of Assets	$ 2,481,341,152
7.	Lower Corridor	1,932,200,784
8.	Upper Corridor	2,898,301,176
9.	Final Actuarial Value of Assets	2,481,341,152

Rate of Return	4.72%

Section V. Participant Information

Participant Summary

The following table summarizes the counts, ages and benefit information for Plan participants used in this valuation.

	Teachers	Police Officers	Firefighters	Total
1. Active				
a. Number	6,171	3,146	1,887	11,204
b. Average Age	41.9	40.1	39.6	41.0
c. Average Service	8.9	12.9	13.1	10.7
d. Average Salary	**$ 113,449**	**$ 107,312**	**$ 99,424**	**$ 109,364**
2. Vested Terminations				
a. Number	1,844	260	91	2,195
b. Average Age	49.1	43.5	43.7	48.2
c. Total Annual Benefits	**$ 27,622,850**	**$ 4,427,318**	**$ 1,466,540**	**$ 33,516,708**
3. Service Retired, Disabled and Beneficiaries (Receiving District Benefits)				
a. Number	4,066	3,405	1,180	8,651
b. Average Age	75.2	61.4	62.6	68.0
c. Total Annual Benefits	**$ 104,191,669**	**$ 158,468,842**	**$ 58,582,725**	**$ 321,243,236**

The following table summarizes all retiree member data and is provided for informational purposes only. The benefits are the total benefits for all members who were employed by the District and include both those that are the District's responsibility and those that are the responsibility of the U.S. Department of the Treasury. The liabilities for benefits that are the responsibility of the U.S. Department of the Treasury are not included in this actuarial valuation.

	Teachers	Police Officers	Firefighters	Total
Service Retired, Disabled and Beneficiaries (Receiving District and/or Federal Benefits)				
a. Number	5,331	6,523	2,107	13,961
b. Average Age	78.0	69.5	70.9	72.9
c. Total Annual Benefits	**$ 292,129,320**	**$ 428,018,846**	**$ 154,861,514**	**$ 875,009,680**

B

Active Age/Service Distribution Including Compensation – Teachers

Shown below is the distribution of active participants based on age and service. The compensation shown is the average of estimated FY2024 pay (pay rate provided as of June 30, 2023 increased with salary scale for one year).

	Years of Service as of 10/01/2023										
Age	**Under 1**	**1-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40 & Up**	**Total**
Under 25	11	94	0	0	0	0	0	0	0	0	105
	68,015	69,053	0	0	0	0	0	0	0	0	68,944
25 - 29	27	444	103	3	0	0	0	0	0	0	577
	74,553	77,241	92,303	75,911	0	0	0	0	0	0	79,797
30 - 34	25	442	468	108	5	0	0	0	0	0	1,048
	85,193	93,730	106,001	115,025	86,927	0	0	0	0	0	101,168
35 - 39	28	325	509	312	51	1	0	0	0	0	1,226
	91,680	103,533	116,988	125,195	131,471	111,807	0	0	0	0	115,530
40 - 44	16	243	370	274	130	24	0	0	0	0	1057
	92,187	106,004	125,160	128,648	129,191	143,033	0	0	0	0	122,063
45 - 49	16	128	257	178	98	95	11	0	0	0	783
	92,183	105,569	127,211	133,391	132,240	135,147	138,667	0	0	0	126,116
50 - 54	11	101	156	121	65	107	80	7	0	0	648
	95,882	108,468	122,526	127,901	124,649	132,944	133,739	138,536	0	0	124,377
55 - 59	5	59	85	60	41	43	37	28	10	0	368
	104,986	104,644	124,812	131,254	124,160	129,978	133,913	138,835	131,965	0	125,067
60 - 64	0	34	26	31	28	29	34	8	14	0	204
	0	104,342	119,384	123,958	130,785	130,243	126,298	135,121	138,909	0	123,790
65 - 69	0	11	21	16	19	8	13	14	12	5	119
	0	96,165	117,810	126,163	127,017	137,718	122,911	144,908	137,731	126,980	125,880
70 & Up	0	4	4	5	2	6	4	4	6	1	36
	0	105,048	116,943	118,977	120,375	128,341	119,932	161,851	127,697	136,243	125,645
Totals	**139**	**1,885**	**1,999**	**1,108**	**439**	**313**	**179**	**61**	**42**	**6**	**6,171**
	86,241	**94,053**	**116,775**	**126,816**	**128,480**	**133,695**	**131,570**	**141,217**	**135,317**	**128,524**	**113,449**

Averages	
Age	41.9
Service	8.9

Active Age/Service Distribution Including Compensation – Police

Shown below is the distribution of active participants based on age and service. The compensation shown is the average of estimated FY2024 pay (pay rate provided as of June 30, 2023 increased with salary scale for one year).

	Years of Service as of 10/01/2023										
Age	**Under 1**	**1-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40 & Up**	**Total**
Under 25	18	80	3	0	0	0	0	0	0	0	101
	72,330	76,771	82,418	0	0	0	0	0	0	0	76,147
25 - 29	32	252	156	2	0	0	0	0	0	0	442
	73,152	81,433	90,693	98,381	0	0	0	0	0	0	84,178
30 - 34	10	120	318	77	1	0	0	0	0	0	526
	72,330	82,677	96,185	104,574	73,575	0	0	0	0	0	93,835
35 - 39	9	53	154	217	102	0	0	0	0	0	535
	72,330	82,029	96,606	107,213	116,312	0	0	0	0	0	102,813
40 - 44	5	20	55	98	318	51	0	0	0	0	547
	77,246	85,046	98,529	109,022	119,859	129,597	0	0	0	0	115,018
45 - 49	3	7	29	22	123	203	44	0	0	0	431
	72,330	90,143	96,336	108,215	118,866	127,876	148,626	0	0	0	123,298
50 - 54	0	4	11	19	86	146	70	11	0	0	347
	0	79,037	96,452	116,628	116,846	126,992	149,443	146,545	0	0	127,538
55 - 59	1	3	5	2	44	65	21	28	2	0	171
	72,330	139,302	95,661	101,208	118,030	124,017	145,901	156,829	164,393	0	129,879
60 - 64	0	0	0	5	8	19	2	7	4	1	46
	0	0	0	106,841	115,983	122,976	159,004	141,417	144,772	137,266	126,584
65 - 69	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
70 & Up	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
Totals	**78**	**539**	**731**	**442**	**682**	**484**	**137**	**46**	**6**	**1**	**3,146**
	72,983	**81,628**	**95,228**	**107,538**	**118,538**	**127,080**	**148,777**	**152,025**	**151,313**	**137,266**	**107,312**

Averages	
Age	40.1
Service	12.9

Active Age/Service Distribution Including Compensation – Fire

Shown below is the distribution of active participants based on age and service. The compensation shown is the average of estimated FY2024 pay (pay rate provided as of June 30, 2023 increased with salary scale for one year).

	Years of Service as of 10/01/2023										
Age	**Under 1**	**1-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40 & Up**	**Total**
Under 25	26	57	2	0	0	0	0	0	0	0	85
	65,269	67,380	64,727	0	0	0	0	0	0	0	66,672
25 - 29	36	124	98	19	0	0	0	0	0	0	277
	65,553	72,897	81,218	85,193	0	0	0	0	0	0	75,730
30 - 34	13	113	125	37	0	0	0	0	0	0	288
	66,220	73,085	82,890	91,726	0	0	0	0	0	0	79,426
35 - 39	7	48	71	78	161	3	0	0	0	0	368
	67,517	72,216	84,842	99,228	108,357	136,396	0	0	0	0	96,623
40 - 44	0	21	22	51	202	15	1	0	0	0	312
	0	72,460	87,731	104,827	112,887	116,451	162,110	0	0	0	107,403
45 - 49	0	2	5	12	115	96	20	4	0	0	254
	0	77,827	86,474	96,818	111,183	127,691	139,828	151,396	0	0	118,883
50 - 54	0	2	4	3	26	113	26	20	0	0	194
	0	82,964	103,193	90,711	119,832	121,262	129,398	153,929	0	0	124,289
55 - 59	0	1	2	0	7	26	32	12	1	0	81
	0	116,284	95,409	0	162,393	114,671	130,786	166,741	249,563	0	134,085
60 - 64	0	0	1	0	0	4	8	5	7	1	26
	0	0	177,184	0	0	157,565	118,553	135,246	150,411	142,021	139,500
65 - 69	0	0	0	0	0	1	0	1	0	0	2
	0	0	0	0	0	119,610	0	111,604	0	0	115,607
70 & Up	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
Totals	**82**	**368**	**330**	**200**	**511**	**258**	**87**	**42**	**8**	**1**	**1,887**
	65,736	**72,186**	**83,688**	**97,662**	**112,108**	**123,443**	**131,685**	**154,116**	**162,805**	**142,021**	**99,424**

Averages	
Age	39.6
Service	13.1

B

Participant Reconciliation – Teachers

Shown below is the reconciliation of participants between the prior and current valuation date.

Teachers	Active Participants	Inactive Participants: Retirees	Inactive Participants: Disabled Retirees	Inactive Participants: Beneficiaries	Inactive Participants: Vested Terms	Total
Participants in Last Valuation	6,088	3,762	102	201	1,718	11,871
Death	(7)	(98)	(8)	(5)	0	(118)
Disabled	0	0	0	0	0	0
Retired	(61)	94	0	0	(33)	0
Vested Termination	(238)	0	0	0	238	0
Nonvested Termination	(444)	0	0	0	0	(444)
Return of Contributions/Benefits Ended	(94)	(3)	0	(3)	(41)	(141)
New Actives	874	0	0	0	0	874
Rehire from Vested Term	38	0	0	0	(38)	0
Rehire from Nonvested Term	17	0	0	0	0	17
New Beneficiaries	0	0	0	18	0	18
Data Adjustment	(2)	6	1	(1)	0	4
Participants in This Valuation	6,171	3,761	95	210	1,844	12,081

In addition, there are 1,287 participants who are non-vested and due a refund of employee contributions.

Participant Reconciliation – Police

Shown below is the reconciliation of participants between the prior and current valuation date.

Police	Active Participants	Inactive Participants: Retirees	Inactive Participants: Disabled Retirees	Inactive Participants: Beneficiaries	Inactive Participants: Vested Terms	Total
Participants in Last Valuation	3,282	2,478	335	438	258	6,791
Death	(3)	(22)	(2)	(10)	0	(37)
Disabled	(9)	0	12	0	(3)	0
Retired	(129)	152	0	0	(23)	0
Vested Termination	(46)	0	0	0	46	0
Nonvested Termination	(60)	0	0	0	0	(60)
Return of Contributions/Benefits Ended	(35)	0	0	(6)	(16)	(57)
New Actives	142	0	0	0	0	142
Rehire from Vested Term	2	0	0	0	(2)	0
Rehire from Nonvested Term	2	0	0	0	0	2
New Beneficiaries	0	0	0	30	0	30
Data Adjustment	0	(1)	0	1	0	0
Participants in This Valuation	3,146	2,607	345	453	260	6,811

In addition, there are 181 participants who are non-vested and due a refund of employee contributions.

B

Participant Reconciliation – Fire

Shown below is the reconciliation of participants between the prior and current valuation date.

Fire	Active Participants	Inactive Participants: Retirees	Inactive Participants: Disabled Retirees	Inactive Participants: Beneficiaries	Inactive Participants: Vested Terms	Total
Participants in Last Valuation	1,851	853	101	168	98	3,071
Death	(2)	(10)	0	(3)	0	(15)
Disabled	(6)	0	7	0	(1)	0
Retired	(47)	58	0	0	(11)	0
Vested Termination	(11)	0	0	0	11	0
Nonvested Termination	(28)	0	0	0	0	(28)
Return of Contributions/Benefits Ended	(4)	(1)	(1)	(5)	(6)	(17)
New Actives	134	0	0	0	0	134
Rehire from Vested Term	0	0	0	0	0	0
Rehire from Nonvested Term	0	0	0	0	0	0
New Beneficiaries	0	0	0	12	0	12
Data Adjustment	0	1	0	0	0	1
Participants in This Valuation	1,887	901	107	172	91	3,158

In addition, there are 91 participants who are non-vested and due a refund of employee contributions.

Schedule of Retiree Member Data – Total Counts

The following table summarizes the total number of Service Retired, Disabled, and Beneficiary members included in the retiree member data. Only the retiree members receiving a benefit from the District are included in this valuation.

	(1) Receiving Only District Benefits	(2) Receiving Only Federal Benefits	(3) Receiving Both District and Federal Benefits	(4) = (1) + (3) Total Receiving District Benefits	(5) = (2) + (3) Total Receiving Federal Benefits	(6) = (1) + (2) + (3) Total Receiving Benefits
Teachers	627	1,265	3,439	4,066	4,704	5,331
Police	626	3,118	2,779	3,405	5,897	6,523
Fire	204	927	976	1,180	1,903	2,107
Total	**1,457**	**5,310**	**7,194**	**8,651**	**12,504**	**13,961**

B

Schedule of Retiree Member Data – Teachers – Receiving District Benefits

Shown below is the schedule of retiree member data. The benefits are only those member benefits that are the District's responsibility.

	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
Attained Age	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	-	$ -	-	$ -	5	$ 37,332	5	$ 37,332
20 to 24	-	-	-	-	3	18,809	3	18,809
25 to 29	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	-	-
35 to 39	-	-	-	-	-	-	-	-
40 to 44	-	-	-	-	3	42,156	3	42,156
45 to 49	-	-	-	-	4	60,171	4	60,171
50 to 54	2	99,731	5	223,608	2	44,664	9	368,003
55 to 59	36	2,094,054	5	190,572	3	43,581	44	2,328,206
60 to 64	184	8,556,201	15	620,067	17	228,158	216	9,404,425
65 to 69	508	19,843,468	18	550,075	25	281,177	551	20,674,719
70 to 74	923	29,025,404	23	560,308	44	434,393	990	30,020,106
75 to 79	1,211	25,881,659	26	520,960	48	338,516	1,285	26,741,135
80 to 84	673	11,019,459	3	32,462	36	241,384	712	11,293,305
85 to 89	191	2,588,725	-	-	12	85,068	203	2,673,792
90 to 94	29	410,690	-	-	5	32,271	34	442,961
95 and over	4	57,900	-	-	3	28,647	7	86,547
Total	**3,761**	**$ 99,577,291**	**95**	**$ 2,698,052**	**210**	**$ 1,916,326**	**4,066**	**$ 104,191,669**

Schedule of Retiree Member Data – Teachers – Receiving District and/or Federal Benefits

Shown below is the schedule of all retiree member data. The benefits are the total member benefits and include both those that are the District's responsibility and those that are the responsibility of the U.S. Department of the Treasury.

	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
Attained Age	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	-	$ -	-	$ -	5	$ 37,332	5	$ 37,332
20 to 24	-	-	-	-	3	25,836	3	25,836
25 to 29	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	-	-
35 to 39	-	-	-	-	-	-	-	-
40 to 44	-	-	-	-	3	42,156	3	42,156
45 to 49	-	-	-	-	4	78,276	4	78,276
50 to 54	2	110,520	5	223,608	5	74,244	12	408,372
55 to 59	36	2,586,156	5	190,572	5	68,988	46	2,845,716
60 to 64	185	10,788,552	19	807,024	21	403,776	225	11,999,352
65 to 69	511	28,039,008	21	829,188	28	609,720	560	29,477,916
70 to 74	933	53,862,804	27	1,108,752	52	1,242,276	1,012	56,213,832
75 to 79	1,285	75,708,576	55	2,068,980	79	1,880,304	1,419	79,657,860
80 to 84	878	51,842,352	28	982,200	88	2,169,828	994	54,994,380
85 to 89	512	30,302,964	24	894,168	51	1,372,584	587	32,569,716
90 to 94	261	14,805,408	12	450,408	52	1,422,144	325	16,677,960
95 and over	113	6,368,088	4	181,032	19	551,496	136	7,100,616
Total	**4,716**	**$ 274,414,428**	**200**	**$ 7,735,932**	**415**	**$ 9,978,960**	**5,331**	**$ 292,129,320**

Schedule of Retiree Member Data – Teachers – Receiving Federal Benefits

Shown below is the schedule of retiree member data. The benefits are only those member benefits that are the responsbility of the U.S. Department of the Treasury.

	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
Attained Age	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	-	$ -	-	$ -	-	$ -	-	$ -
20 to 24	-	-	-	-	2	7,027	2	7,027
25 to 29	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	-	-
35 to 39	-	-	-	-	-	-	-	-
40 to 44	-	-	-	-	-	-	-	-
45 to 49	-	-	-	-	2	18,105	2	18,105
50 to 54	2	10,789	-	-	3	29,580	5	40,369
55 to 59	32	492,102	-	-	3	25,407	35	517,510
60 to 64	140	2,232,351	10	186,957	16	175,618	166	2,594,927
65 to 69	364	8,195,540	17	279,113	20	328,543	401	8,803,197
70 to 74	762	24,837,400	23	548,444	44	807,883	829	26,193,726
75 to 79	1,166	49,826,917	53	1,548,020	71	1,541,788	1,290	52,916,725
80 to 84	831	40,822,893	28	949,738	82	1,928,444	941	43,701,075
85 to 89	505	27,714,239	24	894,168	46	1,287,516	575	29,895,924
90 to 94	259	14,394,718	12	450,408	52	1,389,873	323	16,234,999
95 and over	113	6,310,188	4	181,032	18	522,849	135	7,014,069
Total	**4,174**	**$ 174,837,137**	**171**	**$ 5,037,880**	**359**	**$ 8,062,634**	**4,704**	**$ 187,937,651**

Schedule of Retiree Member Data – Police – Receiving District Benefits

Shown below is the schedule of retiree member data. The benefits are only those member benefits that are the District's responsibility.

	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
Attained Age	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	-	$ -	-	$ -	34	$ 393,763	34	$ 393,763
20 to 24	-	-	-	-	6	47,604	6	47,604
25 to 29	-	-	-	-	1	18,400	1	18,400
30 to 34	-	-	10	414,264	-	-	10	414,264
35 to 39	-	-	10	369,852	2	92,385	12	462,237
40 to 44	-	-	14	591,672	4	108,480	18	700,152
45 to 49	34	2,427,605	23	962,400	13	354,280	70	3,744,285
50 to 54	318	23,947,589	58	2,624,636	52	1,296,776	428	27,869,001
55 to 59	792	51,675,777	97	3,402,110	67	1,665,116	956	56,743,002
60 to 64	662	36,860,244	65	1,953,605	73	1,445,921	800	40,259,769
65 to 69	404	15,813,944	47	1,221,771	75	1,258,056	526	18,293,771
70 to 74	279	5,810,755	16	178,165	71	1,275,464	366	7,264,384
75 to 79	103	1,066,340	4	84,378	48	746,576	155	1,897,294
80 to 84	15	186,021	1	19,452	6	152,926	22	358,399
85 to 89	-	-	-	-	1	2,515	1	2,515
90 to 94	-	-	-	-	-	-	-	-
95 and over	-	-	-	-	-	-	-	-
Total	**2,607**	**$ 137,788,275**	**345**	**$ 11,822,304**	**453**	**$ 8,858,263**	**3,405**	**$ 158,468,842**

Schedule of Retiree Member Data – Police – Receiving District and/or Federal Benefits

Shown below is the schedule of all retiree member data. The benefits are the total member benefits and include both those that are the District's responsibility and those that are the responsibility of the U.S. Department of the Treasury.

	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
Attained Age	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	-	$ -	-	$ -	36	$ 493,104	36	$ 493,104
20 to 24	-	-	-	-	6	66,528	6	66,528
25 to 29	-	-	-	-	2	114,912	2	114,912
30 to 34	-	-	10	414,264	1	58,500	11	472,764
35 to 39	-	-	10	369,852	2	94,296	12	464,148
40 to 44	-	-	14	591,672	5	145,164	19	736,836
45 to 49	34	2,435,912	23	962,400	13	371,136	70	3,769,448
50 to 54	318	28,295,118	59	2,650,836	57	1,849,689	434	32,795,643
55 to 59	792	69,110,985	104	4,418,772	75	2,395,380	971	75,925,137
60 to 64	663	57,112,141	87	3,784,080	114	4,335,168	864	65,231,389
65 to 69	437	37,771,621	85	4,303,212	169	6,103,879	691	48,178,713
70 to 74	641	46,136,066	118	6,539,136	273	10,186,045	1,032	62,861,246
75 to 79	771	53,010,792	120	6,302,988	320	12,262,566	1,211	71,576,346
80 to 84	325	23,172,156	85	4,674,576	234	9,131,292	644	36,978,024
85 to 89	146	10,349,400	41	2,413,008	175	7,049,364	362	19,811,772
90 to 94	26	1,976,556	19	1,152,060	60	2,474,280	105	5,602,896
95 and	6	768,564	8	580,740	39	1,590,636	53	2,939,940
Total	**4,159**	**$ 330,139,310**	**783**	**$ 39,157,596**	**1,581**	**$ 58,721,939**	**6,523**	**$ 428,018,846**

Schedule of Retiree Member Data – Police – Receiving Federal Benefits

Shown below is the schedule of retiree member data. The benefits are only those member benefits that are the responsbility of the U.S. Department of the Treasury.

	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
Attained Age	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	-	$ -	-	$ -	15	$ 99,341	15	$ 99,341
20 to 24	-	-	-	-	4	18,924	4	18,924
25 to 29	-	-	-	-	2	96,512	2	96,512
30 to 34	-	-	-	-	1	58,500	1	58,500
35 to 39	-	-	-	-	1	1,911	1	1,911
40 to 44	-	-	-	-	1	36,684	1	36,684
45 to 49	7	8,307	-	-	1	16,856	8	25,163
50 to 54	265	4,347,529	2	26,200	27	541,766	295	4,926,642
55 to 59	727	17,435,208	77	1,016,662	28	730,264	832	19,182,135
60 to 64	626	20,251,897	85	1,830,475	78	2,874,162	790	24,971,619
65 to 69	417	21,957,677	78	3,081,441	131	4,886,975	627	29,939,578
70 to 74	633	40,325,311	117	6,360,971	232	8,910,581	982	55,596,862
75 to 79	770	51,944,452	119	6,218,610	290	11,515,990	1,179	69,679,052
80 to 84	325	22,986,135	85	4,655,124	230	8,978,366	640	36,619,625
85 to 89	146	10,349,400	41	2,413,008	175	7,046,849	362	19,809,257
90 to 94	26	1,976,556	19	1,152,060	60	2,474,280	105	5,602,896
95 and over	6	768,564	8	580,740	39	1,590,636	53	2,939,940
Total	**3,948**	**$ 192,351,036**	**631**	**$ 27,335,292**	**1,315**	**$ 49,878,595**	**5,897**	**$ 269,604,640**

Schedule of Retiree Member Data – Fire – Receiving District Benefits

Shown below is the schedule of retiree member data. The benefits are only those member benefits that are the District's responsibility.

	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
Attained Age	**No.**	**Annual Benefits**	**No.**	**Annual Benefits**	**No.**	**Annual Benefits**	**No.**	**Annual Benefits**
Under 20	-	$ -	-	$ -	12	$ 142,092	12	$ 142,092
20 to 24	-	-	-	-	4	247,571	4	247,571
25 to 29	-	-	-	-	-	-	-	-
30 to 34	-	-	1	28,440	-	-	1	28,440
35 to 39	-	-	7	231,852	3	74,374	10	306,226
40 to 44	-	-	10	405,012	2	58,200	12	463,212
45 to 49	-	-	10	446,112	3	55,416	13	501,528
50 to 54	114	8,718,297	20	1,084,380	16	497,960	150	10,300,637
55 to 59	170	12,383,934	15	459,271	24	598,258	209	13,441,463
60 to 64	233	14,149,317	9	365,167	29	868,084	271	15,382,568
65 to 69	225	11,305,700	16	372,837	29	860,064	270	12,538,601
70 to 74	106	2,977,714	18	304,942	26	613,348	150	3,896,004
75 to 79	45	796,485	1	1,617	15	265,664	61	1,063,766
80 to 84	8	89,294	-	-	6	117,699	14	206,993
85 to 89	-	-	-	-	3	63,624	3	63,624
90 to 94	-	-	-	-	-	-	-	-
95 and over	-	-	-	-	-	-	-	-
Total	**901**	**$ 50,420,741**	**107**	**$ 3,699,630**	**172**	**$ 4,462,355**	**1,180**	**$ 58,582,725**

B

Schedule of Retiree Member Data – Fire – Receiving District and/or Federal Benefits

Shown below is the schedule of all retiree member data. The benefits are the total member benefits and include both those that are the District's responsibility and those that are the responsibility of the U.S. Department of the Treasury.

	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
Attained Age	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	-	$ -	-	$ -	12	$ 144,000	12	$ 144,000
20 to 24	-	-	-	-	4	354,552	4	354,552
25 to 29	-	-	-	-	-	-	-	-
30 to 34	-	-	1	28,440	-	-	1	28,440
35 to 39	-	-	7	231,852	3	103,308	10	335,160
40 to 44	-	-	10	405,012	2	58,200	12	463,212
45 to 49	-	-	10	446,112	4	90,384	14	536,496
50 to 54	114	10,663,526	20	1,084,380	16	574,956	150	12,322,862
55 to 59	170	15,652,018	15	532,740	25	753,000	210	16,937,758
60 to 64	233	21,482,801	12	582,516	36	1,288,332	281	23,353,649
65 to 69	226	22,462,956	26	1,455,576	47	1,965,384	299	25,883,916
70 to 74	138	12,647,520	41	2,632,752	64	2,497,752	243	17,778,024
75 to 79	165	14,346,396	35	2,180,232	97	3,776,574	297	20,303,202
80 to 84	154	12,912,036	51	3,587,424	119	4,633,720	324	21,133,180
85 to 89	67	5,563,404	18	1,047,048	67	2,649,744	152	9,260,196
90 to 94	24	2,239,764	14	906,000	37	1,627,632	75	4,773,396
95 and over	1	64,596	2	126,408	20	1,062,468	23	1,253,472
Total	**1,292**	**$ 118,035,017**	**262**	**$ 15,246,492**	**553**	**$ 21,580,006**	**2,107**	**$ 154,861,514**

Schedule of Retiree Member Data – Fire – Receiving Federal Benefits

Shown below is the schedule of retiree member data. The benefits are only those member benefits that are the responsbility of the U.S. Department of the Treasury.

Attained Age	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	-	$ -	-	$ -	2	$ 1,908	2	$ 1,908
20 to 24	-	-	-	-	3	106,981	3	106,981
25 to 29	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	-	-
35 to 39	-	-	-	-	2	28,934	2	28,934
40 to 44	-	-	-	-	-	-	-	-
45 to 49	-	-	-	-	1	34,968	1	34,968
50 to 54	108	1,945,229	-	-	6	76,996	114	2,022,225
55 to 59	161	3,268,084	10	73,469	8	154,742	179	3,496,295
60 to 64	226	7,333,484	11	217,349	16	420,248	253	7,971,080
65 to 69	213	11,157,256	26	1,082,739	30	1,047,745	270	13,345,315
70 to 74	135	9,669,806	40	2,327,810	49	1,884,404	224	13,882,020
75 to 79	165	13,549,911	35	2,178,615	89	3,510,910	289	19,239,436
80 to 84	154	12,822,742	51	3,587,424	114	4,516,021	319	20,926,187
85 to 89	67	5,563,404	18	1,047,048	64	2,586,120	149	9,196,572
90 to 94	24	2,239,764	14	906,000	37	1,627,632	75	4,773,396
95 and over	1	64,596	2	126,408	20	1,062,468	23	1,253,472
Total	**1,254**	**$ 67,614,276**	**207**	**$ 11,546,862**	**441**	**$ 17,060,076**	**1,903**	**$ 96,278,789**

Schedule of Retiree Member Data – Added and Removed from Rolls – Receiving District Benefit

Shown below is the schedule of District retiree members added and removed.

District Benefit ($ in Thousands)

		Added		Removed			Rolls at End of Year			
Fiscal Year Ended	Plan	Number	Annual Allowances	Number	Annual Allowances	Increase due to Plan Amendments	Number	Annual Allowances	Percentage Increase in Annual Allowances	Average Annual Allowances
September 30, 2019	Teachers	141	$ 4,693	72	$ 1,278	$ 1,890	4,059	$ 81,840	6.9%	$ 20
	Police	233	12,244	27	569	1,492	2,799	96,643	15.8%	35
	Fire	68	3,673	16	252	501	900	32,270	13.8%	36
September 30, 2020	Teachers	98	$ 3,471	86	$ 1,767	$ 1,824	4,071	$ 85,368	4.3%	$ 21
	Police	188	10,010	35	757	2,835	2,952	108,731	12.5%	37
	Fire	86	5,258	9	551	884	977	37,861	17.3%	39
September 30, 2021	Teachers	96	$ 3,642	95	$ 1,524	$ 1,124	4,072	$ 88,610	3.8%	$ 22
	Police	201	11,821	58	1,173	1,192	3,095	120,571	10.9%	39
	Fire	63	3,829	20	519	440	1,020	41,611	9.9%	41
September 30, 2022	Teachers	111	$ 3,945	118	$ 2,060	$ 6,191	4,065	$ 96,686	9.1%	$ 24
	Police	199	11,329	43	866	7,842	3,251	138,876	15.2%	43
	Fire	113	7,540	11	415	2,543	1,122	51,279	23.2%	46
September 30, 2023	Teachers	119	$ 4,128	118	$ 2,116	$ 5,494	4,066	$ 104,192	7.8%	$ 26
	Police	195	12,206	41	1,071	8,457	3,405	158,469	14.1%	47
	Fire	78	4,784	20	511	3,032	1,180	58,583	14.2%	50

Schedule of Retiree Member Data – Added and Removed from Rolls – Receiving Federal and/or District Benefit

Shown below is the schedule of Federal and/or District retiree members added and removed.

Federal Plus District Benefit ($ in Thousands)

		Added		Removed			Rolls at End of Year			
Fiscal Year Ended	Plan	Number	Annual Allowances	Number	Annual Allowances	Increase due to Plan Amendments	Number	Annual Allowances	Percentage Increase in Annual Allowances	Average Annual Allowances
September 30, 2019	Teachers	165	$ 6,648	248	$ 10,146	$ 5,088	5,923	$ 275,295	0.6%	$ 46
	Police	314	18,580	184	8,464	7,848	6,359	347,414	5.5%	55
	Fire	98	5,985	90	4,425	3,306	2,045	124,700	4.1%	61
September 30, 2020	Teachers	124	$ 4,710	271	$ 11,621	$ 5,880	5,776	$ 274,265	-0.4%	$ 47
	Police	272	15,538	211	9,937	8,123	6,420	361,138	4.0%	56
	Fire	119	7,848	102	4,935	2,182	2,062	129,795	4.1%	63
September 30, 2021	Teachers	108	$ 4,944	281	$ 12,343	$ 3,670	5,603	$ 270,537	-1.4%	$ 48
	Police	287	17,484	246	11,413	4,658	6,461	371,867	3.0%	58
	Fire	92	5,733	113	5,751	1,657	2,041	131,434	1.3%	64
September 30, 2022	Teachers	125	$ 5,176	256	$ 12,004	$ 19,590	5,472	$ 283,300	4.7%	$ 52
	Police	260	15,754	215	10,418	23,931	6,506	401,134	7.9%	62
	Fire	136	9,932	75	4,200	8,211	2,102	145,378	10.6%	69
September 30, 2023	Teachers	132	$ 5,327	273	$ 13,099	$ 16,602	5,331	$ 292,129	3.1%	$ 55
	Police	268	16,120	251	13,492	24,311	6,523	428,073	6.7%	66
	Fire	111	6,898	106	6,030	8,616	2,107	154,862	6.5%	73

Section VI. Summary of Plan Provisions

Teachers' Retirement Plan

Effective Date
Established on September 18, 1998, the Plan applies to benefit payments based on service accrued after June 30, 1997. The U.S. Department of the Treasury is responsible for paying all benefits accrued before this date.

Definitions

Affiliated Employers
District of Columbia Public Schools

Covered Members
Teachers and other educational employees in a salary class position ET 1-15 under the District of Columbia Public Schools (DCPS) system become members automatically on their date of employment. Covered members who leave the DCPS system to work for a D.C. public charter school may elect to remain in the Plan. Such members who are on a leave of absence to teach in a D.C. public charter school must remain in the Plan. Substitute teachers and rehired retirees are not covered.

Service Credit
One year of teaching service is given for each year of employment with DCPS. Service credit may also include purchased prior civilian government service and outside teaching service. For purposes of retirement eligibility and benefit accrual, creditable Federal and District service is aggregated in determining total creditable service.

Average Salary
Highest 36 consecutive months of pay, divided by three.

Vested
Members who accrue five or more years of creditable DCPS teaching service are vested for benefits. If a vested members leaves service, they may leave their Member Contributions with the Plan for a future deferred vested benefit when reaching eligibility for retirement (deferred vested in this report).

Contributions

Member Contributions
Members hired before November 1, 1996 are required to contribute 7% of annual pay. Members hired on or after November 1, 1996 contribute 8% of annual pay. Interest is not credited to each Member's accumulated contributions.

Refund of Member Contributions
In the event a member leaves service prior to retirement, vested members may leave their contributions in the Plan or request a refund. Nonvested members must take a refund. No interest is accrued on contributions.

B

Service Retirement

Eligibility
The Age and Service Credit requirements to be eligible for a full Service Retirement are listed below:

Members hired before November 1, 1996

Age	Service Credit
55	30, including 5 years DCPS service
60	20, including 5 years DCPS service
62	5 years DCPS service

Members hired on and after November 1, 1996

Age	Service Credit
Any Age	30, including 5 years DCPS service
60	20, including 5 years DCPS service
62	5 years DCPS service

Benefit
For members hired before November 1, 1996:

- 1.5% of Average Salary times service through 5 years, plus
- 1.75% of Average Salary times service from 6 through 10 years, plus
- 2.0% of Average Salary times service over 10 years.

For members hired on or after November 1, 1996:

- 2.0% of Average Salary times service.

All members receive a minimum benefit of 1.0% of Average Salary plus $25 for each year of service.

Involuntary Service Retirement

Eligibility
The Age and Service Credit requirements to be eligible for a Reduced Service Retirement are listed below:

All Members, regardless of date of hire

Age	Service Credit
Any Age	25, including 5 years DCPS service
50	20, including 5 years DCPS service

Benefit
Service Retirement Benefit reduced by 1/6% per month (or 2% per year) that date of retirement precedes age 55.

Disability Retirement

Eligibility
Active members with five or more years of DCPS service credit are covered (vested) for disability retirement. To be eligible, the member must be found to be incapable of satisfactorily performing the duties of his/her position as determined by DCPS.

Benefit
Equal to Service Retirement benefit. Minimum benefit is the lesser of a) or b):

a. 40% of Average Salary
b. Calculated benefit amount by projecting service to age 60.

Survivor Benefits

Lump Sum
Eligibility
Death before completion of 18 months of school service or death without an eligible spouse/domestic partner, child or parent.

Benefit
Refund of member contributions.

Spouse/Domestic Partner Only
Eligibility
Death before retirement and married/registered domestic partnership for at least two years, or have a child by the marriage or registered domestic partnership.

Benefit
55% of Service Retirement benefit. Minimum benefit is the lesser of a) or b):

a. 55% of 40% of Average Salary
b. 55% of the calculated benefit amount by projecting service to age 60.

Spouse/Domestic Partner & Dependent Children
Eligibility
Death before retirement and married/registered domestic partnership for at least two years, or have a child by the marriage or registered domestic partnership. Children must be unmarried and not in a domestic partnership and under age 18, 22 if full-time student, or any dependent child incapable of self-support due to a disability incurred before age 18. Death does not have to occur before retirement for the children’s benefit.

Spouse/Domestic Partner Benefit
55% of Service Retirement benefit. Minimum benefit is the lesser of a) or b):

- 55% of 40% of Average Salary
- 55% of the calculated benefit amount by projecting service to age 60.

Survivor Benefits

Spouse/Domestic Partner & Dependent Children (continued)

Child Benefit

A benefit per child equal to the smallest of a) or b) or c):

a. 60% of Average Salary divided by the number of eligible children
b. $8,580[1] (if hired before 1/1/1980), $8,268[1] (if hired between 1/1/1980 and 10/31/1996), or $7,476[1] (if hired on or after 11/1/1996) per child
c. $25,740[1] (if hired before 1/1/1980), $24,804[1] (if hired between 1/1/1980 and 10/31/1996), or $22,428[1] (if hired on or after 11/1/1996) divided by the number of children.

Dependent Children Only

Eligibility

Children must be unmarried and not in a domestic partnership and under age 18, 22 if full-time student, or any dependent child incapable of self-support due to a disability incurred before age 18. Death does not have to occur before retirement for the children's benefit.

Benefit

A benefit per child equal to the smallest of a) or b) or c):

a. 60% of Average Salary divided by the number of eligible children
b. $10,500[1] (if hired before 1/1/1980), $10,092[1] (if hired between 1/1/1980 and 10/31/1996), or $9,048[1] (if hired on or after 11/1/1996) per child
c. $31,500[1] (if hired before 1/1/1980), $30,276[1] (if hired between 1/1/1980 and 10/31/1996), or $27,144[1] (if hired on or after 11/1/1996) divided by the number of children.

Parents Only

Eligibility

Death before retirement and no eligible spouse/domestic partner or children, and parents must have received at least one-half of their total income from the member immediately before the member's death.

Benefit

55% of Service Retirement benefit. Minimum benefit is the lesser of a) or b):

a. 55% of 40% of Average Salary
b. 55% of the calculated benefit amount by projecting service to age 60.

[1] Survivor benefit amounts are as of March 1, 2023 and are subject to annual inflation adjustments.

Deferred Vested Retirement

Eligibility
Active members with five or more years of DCPS service credit.

Benefit
Benefit is calculated in the same manner as Service Retirement benefit and may be collected starting at age 62.

Retirement Options

Retirement and disability benefits are payable for the life of the retired member. Optional reduced retirement benefits may be elected at the time of retirement to provide for continuation of a reduced survivor benefit amount to a designated beneficiary. Optional forms include:

a. Reduced Annuity with a Maximum Survivor Annuity (to Spouse/Domestic Partner):
   Reduced benefit paid to the member so that upon the member's death, the spouse/domestic partner will receive 55% of the unreduced (normal life) annuity. Member's benefit is reduced by 2.5% of retirement benefit, up to $3,600, plus 10% of any retirement benefit over $3,600.

b. Reduced Annuity with a Partial Survivor Annuity (to Spouse/Domestic Partner)
   Reduced benefit paid to the member so that upon the member's death, the spouse/domestic partner will receive a partial annuity that can range from $1 up to any amount less than 55% of the unreduced (normal life) annuity amount. Member's benefit is reduced by the same amount as option a) above, multiplied by the ratio of the chosen benefit percent to the maximum benefit percent (55%).

c. Reduced Annuity with a Life Insurance Benefit
   Member elects a life insurance amount, payable in a lump sum to a designated beneficiary upon the member's death.

d. Reduced Annuity with a Survivor Annuity to a Person with an Insurable Interest
   A 55% joint and survivor annuity where the original benefit is reduced by 10% plus an additional 5% for each full 5 years, up to 25 years, that the designated beneficiary is younger than the member. Maximum reduction is 40% for any beneficiary who is 25 or more years younger than the member.

Cost-of-Living Adjustments (COLA)

Each year on March 1, benefits which have been paid for at least twelve months preceding March 1 may be increased. The increase is equal to the annual Consumer Price Index (CPI-W Washington/Baltimore area). COLA's are included in benefit payments on and after April 1. If a member's retirement is effective after March 1 of the preceding year, the COLA amount is prorated.

For members hired on or after November 1, 1996, the cost-of-living increase is limited to no more than 3% per year.

Changes since Prior Valuation

The child death benefit amounts were increased with inflation effective March 1, 2023.

Section VI. Summary of Plan Provisions

Police Officers and Firefighters' Retirement Plan

Effective Date
Established on September 18. 1998, the Plan applies to benefit payments based on service accrued after June 30, 1997. The U.S. Department of the Treasury is responsible for paying all benefits accrued before this date.

Definitions

Affiliated Employers
The District of Columbia Metropolitan Police Department (MPD) and the District of Columbia Department of Fire and Emergency Medical Services (FEMS).

Covered Members
Sworn Police Officers and Firefighters become members on their first day of active duty (cadets are not eligible). Membership is not automatic for uniformed EMT Firefighters. EMTs must be cross-trained in fire suppression, go through the fire academy, and considered sworn Firefighters.

Service Credit
One year of service is given for each year of employment with MPD or FEMS. Service Credit may also include approved purchased lateral transferred service, prior civilian government service and prior military service. For purposes of retirement eligibility and benefit accrual, creditable Federal and District service is aggregated in determining total creditable service.

Average Salary
For members hired before February 15, 1980, the highest 12 consecutive months of pay. For members hired on or after February 15, 1980, the highest 36 consecutive months of pay, divided by 3. Base pay does not include overtime, holiday or military pay. Longevity pay is included in Firefighters' base pay and in Police Officers' base pay once the member has completed 25 years of service.

Vested
Members who accrue five or more years of Service Credit are vested for benefits. If these members leave service, they may leave their Member Contribution Accounts with the Plan for a future benefit when reaching eligibility for retirement (deferred vested in this report).

Contributions

Member Contributions

Members hired before November 10, 1996 contribute 7.0% of salary. Members hired on or after November 10, 1996 contribute 8.0% of salary. Member contributions, together with any purchased service credit payments, are credited to individual Member Contribution Accounts. No interest is accrued on contributions.

Refund of Member Contributions

In the event a vested member leaves service prior to retirement, member contributions may be left in the Plan or refunded upon request. Nonvested members must take a refund. No interest is accrued on contributions.

Service Retirement

Eligibility

The Age and Service Credit requirements to be eligible for a full Service Retirement are listed below:

Members hired before November 10, 1996

Age	Service Credit
Any age	20 years departmental service (only if hired before 2/15/1980)
50	25 years departmental service
60	5 years departmental service

Members hired on and after November 10, 1996

Age	Service Credit
Any age	25 years departmental service
60	

Benefit

For members hired before November 10, 1996:

- 2.5% of Average Salary times departmental service up to 25 years (20 years if hired before 2/15/1980), plus
- 3.0% of Average Salary times departmental service over 25 years (or 20 years if hired before 2/15/1980), plus
- 2.5% of Average Salary times purchased or credited service.

For members hired on or after November 10, 1996:

- 2.5% of Average Salary times total service.

All members are subject to a maximum benefit of 80% of Average Salary.

Service-Related Disability Retirement

Eligibility

Disabled as a result of an injury or disease that permanently disables him/her for the performance of duty.

Benefit

For members hired before February 15, 1980:

2.5% of Average Salary times total years of service, subject to a minimum of 66-2/3% of Average Salary and a maximum of 70% of Average Salary.

For members hired on or after February 15, 1980:

70% of final pay times percentage of disability, subject to a minimum of 40% of final pay.

Nonservice-Related Disability Retirement

Eligibility

Active members with five or more years of departmental service are covered (vested) for disability retirement. The member is eligible if found that the disability precludes further service with his/her department.

Benefit

For members hired before February 15, 1980:

2.0% of Average Salary times total years of service, subject to a minimum of 40% of Average Salary and a maximum of 70% of Average Salary.

For members hired on or after February 15, 1980:

70% of final pay times percentage of disability, subject to a minimum of 30% of final pay.

Survivor Benefits

Lump Sum

Eligibility

Death before retirement without an eligible spouse/domestic partner or child.

Benefit

Refund of member contributions according to Plan’s order of precedence.

Lump Sum – Death In Line Of Duty

Eligibility

Death occurring in the line of duty, not resulting from willful misconduct.

Benefit

$50,000

Survivor Benefits

Spouse Only – Death In Line Of Duty

Eligibility

Member killed in line of duty, after December 29, 1993.

Benefit

100% of final pay.

Spouse Only – Death Not In Line Of Duty

Eligibility

Member death, not in line of duty, after December 29, 1993. If retired, must be married for at least one year or have a child by the marriage/domestic partnership.

Benefit

40% of the greater of a) or b):

a. Average Salary
b. Salary for step 6 salary class 1 of the DC Police and Firemen's Salary Act in effect, adjusted for cost-of-living increases if death occurs after retirement.

Benefit cannot be higher than rate of pay at death (or retirement if death occurs after retirement).

Spouse/Domestic Partner & Dependent Children

Eligibility

Member death, not in line of duty, after December 29, 1993. If retired, must be married/in a domestic partnership for at least one year or have a child by the marriage/domestic partnership. Children must be unmarried, not in a domestic partnership and under age 18, 22 if full-time student, or any dependent child incapable of self-support due to having a disability incurred before age 18. Death does not have to occur before retirement for the children's benefit.

Spouse Benefit

40% of the greater of a) or b):

a. Average Salary
b. Salary for step 6 salary class 1 of the DC Police and Firemen's Salary Act in effect, adjusted for cost-of-living increases if death occurs after retirement.

Benefit cannot be higher than rate of pay at death (or retirement if death occurs after retirement).

Survivor Benefits

Spouse/Domestic Partner & Dependent Children (continued)

Child Benefit

A benefit per child equal to the smallest of a) or b) or c):

a. 60% of Average Salary divided by the number of eligible children
b. $5,028[2] (if hired before 11/10/1996) or $4,572[2] (if hired on or after 11/10/1996) per child
c. $15,084[2] (if hired before 11/10/1996) or $13,716[2] (if hired on or after 11/10/1996) divided by the number of children.

Dependent Children Only

Eligibility

Children must be unmarried and not in a domestic partnership and under age 18, 22 if full-time student, or any dependent child incapable of self-support due to a disability incurred before age 18. Death does not have to occur before retirement for the children's benefit.

Benefit

75% of Average Salary divided by the number of eligible children, adjusted for cost-of-living increases.

Deferred Vested Retirement

Eligibility

Active members with five or more years of departmental service.

Benefit

Benefit is calculated in the same manner as Service Retirement benefit and may be collected starting at age 55.

Retirement Options

Retirement and disability benefits are payable for the life of the retired member. This includes an unreduced joint and survivor annuity as defined above in the "Survivor Benefits – Spouse/Domestic Partnership and Dependent Children" sections.

An optional reduced benefit may be elected at the time of retirement to provide for an additional survivor benefit to a designated beneficiary. Member's original annuity is reduced by 10% and that amount is added to the survivor's benefit. If the designated beneficiary is more than five years younger than the member, the additional amount will be reduced by 5% for each full five years that the beneficiary is younger than the member, subject to a maximum of 40%.

[2] Survivor benefit amounts are as of March 1, 2023 and are subject to annual inflation adjustments.

Cost-of-Living Adjustments (COLA)

Each year on March 1, benefits which have been paid for at least twelve months preceding March 1 may be increased. The increase is equal to the annual Consumer Price Index (CPI-W Washington/Baltimore area). COLA's are included in benefit payments on and after April 1. If member's retirement is effective after March 1 of the preceding year, the COLA amount is prorated.

For members hired on or after November 10, 1996, the cost-of-living increase is limited to no more than 3% per year. Members hired before February 15, 1980, receive equalization pay, which is defined as the percentage increase of active employees' salary increases. Equalization increases are not paid to survivors.

Changes since Prior Valuation

The child death benefit amounts were increased with inflation effective March 1, 2023.

Section VII. Actuarial Methods and Assumptions

Valuation Date
All assets and liabilities are computed as of October 1, 2023. Demographic information was collected as of June 30, 2023. For valuation purposes (e.g., age, service), all members are treated as if remaining in the Plans as of October 1, 2023.

Investment Rate of Return
6.25% per annum, compounded annually (net of investment expenses).

Inflation Assumption
3.00% per annum.

Payroll Growth Assumption
4.00% per annum.

Percent Married
65% of Teachers, Police Officers, and Firefighters are assumed to be married, with the wife 3 years younger than the husband. Active members are assumed to have one dependent child aged 10.

Actuarial Method
The valuation is completed on the basis of the entry age normal cost method calculated on an individual basis with level percentage of pay normal cost.

Amortization of Unfunded Actuarial Accrued Liability
The unfunded actuarial accrued liability (UAAL) is amortized on a level dollar basis based on the following funding policy adopted by the Board in 2012 and amended in 2021:

- Amortize the legacy UAAL as of October 1, 2021 over a closed 15-year period.
- Amortize the assumption and method changes and experience gains for the October 1, 2021 valuation over a closed 20-year period from the valuation date.
- Amortize all subsequent benefit changes, assumption and method changes and experience gains or losses over a closed 20-year period from the date established.
- If a surplus exists (assets exceed liabilities), amortize over 30 years and eliminate all prior amortization bases.

Assets
The method of valuing assets is intended to recognize a “smoothed” market value of assets. Under this method, the difference between actual return on market value from investment experience and the expected return on market value is recognized over a five-year period. The actuarial value of assets is constrained to an 80% to 120% corridor around market value of assets.

Contribution Withdrawal Assumption
For Teachers, Police, and Firefighters, 20% of the vested members who terminate are assumed to elect a withdrawal of their contributions while the remaining 80% are assumed to leave their contributions in the Plan in order to be eligible for a benefit at their deferred retirement date.

Other Assumptions

To value the post-retirement death benefit for Police Officers and Firefighters, the benefit form for all retirements (normal or disabled) is assumed to be a 67.8% Joint and Survivor annuity for all participants. One-fifth of all Police Officer and Firefighter active deaths are assumed to occur in the line of duty.

Post Retirement Cost-of-Living Adjustment

The cost of living, as measured by the CPI, will increase at the rate of 3.25% per year for members hired prior to November 10, 1996 and 2.75% per year for members hired on or after November 10, 1996.

Credited Service and Date of Entry

Service is credited as elapsed time from date of hire. The entry date for participation is date of service.

Military Service and Unused Sick Leave Service

Teachers are assumed to have 0.25 years of combined unused sick leave and military service credit at retirement. All Police and Fire members are assumed to have 1 year of combined unused sick leave and military service credit at retirement.

Administrative Expenses

For Teachers, budgeted administrative expenses of 1.20% of payroll are added to the normal cost rate. For Police Officers and Firefighters, budgeted administrative expenses of 2.10% of payroll are added to the normal cost rate.

Mortality Assumptions

Healthy Retiree and Actives

- Teachers: Pub-2010 General Employee and Healthy Retiree Mortality Table
- Police and Fire: Pub-2010 Safety Employees and Healthy Retiree Mortality Table with male ages set forward 1 year

Disabled Retirees

- Teachers: Pub-2010 General Disabled Retiree Mortality Table
- Police and Fire: Pub-2010 Safety Disabled Retiree Mortality Table

Contingent Beneficiaries

- Teachers: Pub-2010 General Contingent Survivor Mortality Table
- Police and Fire: Pub-2010 Safety Contingent Survivor Mortality Table

Mortality Improvement Scale

Improvement scale MP-2021 is applied on a generational basis. The improvement scale will be updated annually with any subsequent updates available on the valuation date.

Liability for Terminated Non-Vested Participants

The Inactive with Deferred Benefits liability includes a liability for terminated non-vested participants who are due a refund of their contributions. The liability is equal to the refund amount as of the valuation date.

Teachers

Salary Increase Assumption

Representative values of the assumed annual rates of future salary increases are as follows:

Years of Service	Total Increase (Next Year)
5	7.10%
10	4.65
15	4.00
>=20	4.00

Termination Assumption

The assumed annual termination rates are shown in the following table:

	Rate of Termination	
Service	Male	Female
0	25.0%	23.0%
1	26.0%	22.0%
2	22.0%	22.0%
3	20.0%	19.0%
4	14.7%	13.4%
5	14.7%	13.4%
6	13.0%	11.2%
7	13.0%	11.2%
8	13.0%	11.2%
9	13.0%	11.2%
>=10	9.4%	5.8%

B

Retirement Assumption

The assumed annual retirement rates are shown in the following table:

Age	Years of Service						
	5	6 - 19	20	21 - 24	25-29	30	31+
<=50	0%	0%	0%	0%	5%	20%	15%
50 - 59	0%	0%	5%	5%	5%	20%	15%
60 - 61	0%	0%	20%	15%	15%	20%	15%
62	20%	20%	20%	15%	15%	20%	15%
63 - 74	20%	15%	15%	15%	15%	20%	15%
75+	100%	100%	100%	100%	100%	100%	100%

Disability Assumption

Representative values of the assumed disability rates are shown in the following table:

Rate of Disability	
Age	Proposed Rates
30	0.010%
40	0.035%
50	0.010%
60	0.015%

Police Officers

Salary Increases

Police Officers are assumed to receive longevity increases applied to individual base pay at certain years of service. Representative values of the assumed annual rates of future salary increases are as follows:

Years of Service	Total Increase (Next Year)
5	6.25%
10	5.20
15	6.15
19	8.15
20	6.00
24	7.80
25	5.15
29	7.65
30+	7.25

Termination Assumption

The assumed annual termination rates are shown in the following table:

	Rate of Termination	
Service	Male	Female
0	9.0%	10.0%
1	9.0%	7.0%
2	8.0%	7.0%
3	8.0%	5.0%
4	8.0%	3.8%
5	6.2%	3.8%
6	4.1%	2.7%
7	4.1%	2.7%
8	2.7%	2.7%
9	2.7%	2.7%
>=10	2.0%	2.0%

Retirement Assumption

The assumed annual retirement rates are shown in the following table:

Age	Years of Service						
	<=24	25	26	27	28	29	>=30
<62	0%	50%	25%	25%	30%	35%	30%
>=62	100%	100%	100%	100%	100%	100%	100%

Shown rates are for Tier 3 police officers. Tier 2 rates are limited to no earlier than age 50.

Disability Assumption

Representative values of the assumed annual disability rates are shown in the following table:

Age	Disability Retirement Rates
30	0.083%
40	0.173%
50	0.315%
60	0.383%

60% of Police disabilities are assumed to qualify as line of duty.

Firefighters

Salary Increases

Firefighters are assumed to receive longevity increases applied to individual base pay at certain years of service. Representative values of the assumed annual rates of future salary increases are as follows:

Years of Service	Total Increase (Next Year)
5	6.05%
10	6.05
14	7.30
15	4.85
19	6.30
20	4.25
24	5.20
25	4.80
29	6.00
30+	4.50

Termination Assumption

The assumed annual termination rates are shown in the following table:

	Percent Separating in the Next Year	
Service	Male	Female
0	9.0%	16.0%
1	7.0%	12.0%
2	4.2%	2.1%
3	4.2%	2.1%
4	3.4%	2.1%
5	3.4%	1.8%
6	3.4%	2.3%
7	1.7%	2.3%
8	1.7%	2.3%
9	1.7%	2.3%
>=10	1.0%	0.5%

Retirement Assumption

The assumed annual retirement rates are shown in the following table:

Age	Years of Service						
	<=24	25	26	27	28	29	>=30
<62	0%	15%	15%	15%	25%	25%	40%
>=62	100%	100%	100%	100%	100%	100%	100%

Shown retirements rates are for Tier 3 firefighters. Tier 2 rates are limited to no earlier than age 50.

Disability Assumption

Representative values of the assumed annual disability rates are shown in the following table:

Age	Disability Retirement Rates
30	0.135%
40	0.225%
50	0.300%
60	0.375%

60% of Fire disabilities are assumed to qualify as line of duty.

Rationale for Assumptions

The economic and demographic assumptions are based on the experience study for the period ending September 30, 2020, and were adopted by the Board on October 19, 2021.

Changes Since Prior Valuation

None.

Section VIII. Glossary

Actuarial Accrued Liability (AAL)

The difference between the Present Value of Future Benefits and the Present Value of Future Normal Costs or the portion of the present value of future benefits allocated to service before the valuation date in accordance with the actuarial cost method. Represents the present value of benefits expected to be paid from the plan in the future allocated to service prior to the date of the measurement.

Actuarial Assumptions

Estimates of future plan experience such as investment return, expected lifetimes and the likelihood of receiving a pension from the pension plan. Demographic, or "people" assumptions include rates of mortality, retirement and separation. Economic, or "money" assumptions, include expected investment return, inflation and salary increases.

Actuarial Cost Method

A procedure for allocating the Present Value of Future Benefits into the Present Value of Future Normal Costs and the Actuarial Accrued Liability. Also known as the "funding method".

Actuarial Value of Assets (AVA)

The value of the assets as of a given date, used by the actuary for valuation purposes. The AVA may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the actuarially determined contribution (ADC).

Actuarially Determined Contribution (ADC)

The employer's periodic determined contribution to a pension plan, calculated in accordance with the assumptions and methods used by the plan actuary.

Amortization Method

A procedure for payment of the Unfunded Actuarial Accrued Liability (UAAL) by means of periodic contributions of interest and principal. The components of the amortization payment for the UAAL includes the amortization period length, amortization payment increase (level dollar or level percentage of pay), and amortization type (closed or open).

Experience Gain/Loss

A measure of the difference between actuarial experience and experience anticipated by a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Funded Ratio

The actuarial value of assets expressed as a percentage of the plan's actuarial accrued liability.

Low Default-Risk Obligation Measure (LDROM)

The present value of benefits accrued at the valuation date using actuarial assumptions that are generally the same as those used in determining the plan's funding liability, with the discount rate changed to reflect the expected return on a low-default-risk investment portfolio. For plans using a funding method that does not quantify gains and losses annually (but rather spreads them over future years through the changes in the normal cost), the actuarial cost method is also changed to reflect a different pattern of allocating costs to historical periods than is used to determine the ADC.

Market Value of Assets (MVA)
The value of the assets as of a given date held in the trust available to pay for benefits of the pension plan.

Normal Cost
That portion of the Present Value of Future Benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.

Present Value of Future Benefits (PVFB)
The present value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits, and inactive, non-retired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.

Present Value of Future Normal Cost (PVFNC)
The portion of the Present Value of Future Benefits (PVFB) allocated to future service.

Unfunded Actuarial Accrued Liabilities (UAAL)
The difference between the Actuarial Accrued Liability (AAL) and the Actuarial Value of Assets (AVA).

Appendix 1

Summary of Funding Progress

Valuation Date	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability	(3) Percentage Funded (1) / (2)	(4) Unfunded Actuarial Accrued Liability (2) - (1)	(5) Annual Covered Payroll	(6) Unfunded Actuarial Accrued Liability as a Percentage of Covered Payroll (4) / (5)
Teachers' Retirement Plan						
10/1/2019	$ 2,271,160	2,494,291	91.1%	$ 223,131	516,609	43.2%
10/1/2020	2,431,075	2,640,803	92.1%	209,728	551,835	38.0%
10/1/2021	2,684,368	2,698,618	99.5%	14,250	600,481	2.4%
10/1/2022	2,838,193	2,871,570	98.8%	33,376	612,463	5.4%
10/1/2023	2,966,048	3,229,928	91.8%	263,880	700,092	37.7%
Police Officers and Firefighters' Retirement Plan						
10/1/2019	$ 6,269,628	5,604,573	111.9%	$ (665,055)	495,809	(134.1%)
10/1/2020	6,676,013	6,023,843	110.8%	(652,169)	507,348	(128.5%)
10/1/2021	7,290,173	6,181,614	117.9%	(1,108,559)	492,787	(225.0%)
10/1/2022	7,612,268	6,639,124	114.7%	(973,145)	482,092	(201.9%)
10/1/2023	7,864,126	7,358,696	106.9%	(505,430)	525,218	(96.2%)
Total						
10/1/2019	$ 8,540,788	8,098,864	105.5%	$ (441,924)	1,012,418	(43.7%)
10/1/2020	9,107,088	8,664,646	105.1%	(442,442)	1,059,182	(41.8%)
10/1/2021	9,974,541	8,880,232	112.3%	(1,094,309)	1,093,267	(100.1%)
10/1/2022	10,450,461	9,510,693	109.9%	(939,768)	1,094,555	(85.9%)
10/1/2023	10,830,174	10,588,624	102.3%	(241,550)	1,225,309	(19.7%)

($ in Thousands)

Analysis of the dollar amounts of net assets available for benefits, actuarial accrued liability, and unfunded actuarial accrued liability in isolation can be misleading. Expressing the net assets available for benefits as a percentage of the actuarial accrued liability provides one indication of funding status on a going-concern basis. Analysis of this percentage over time indicates whether the plan is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the plan. Trends in unfunded actuarial accrued liability and annual covered payroll are both affected by inflation. Expressing the unfunded actuarial accrued liability as a percentage of annual covered payroll approximately adjusts for the effects of inflation and aids analysis of the District’s progress made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the plan.

Appendix 2

Valuation Solvency Test

The following table shows the accrued liabilities and the portion of accrued liabilities covered by reported assets.

	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Asset		
Valuation Date	(1) Active Member Contributions	(2) Retirees, Survivors and Inactive Members	(3) Active Members (Employer Financed Portion)	Reported Assets	(1)	(2)	(3)
TEACHERS' RETIREMENT PLAN							
10/1/2019	228,893	1,263,613	1,001,785	2,264,428	100.0%	100.0%	77.1%
10/1/2020	302,072	1,304,905	1,033,826	2,411,390	100.0%	100.0%	77.8%
10/1/2021	333,512	1,336,297	1,028,810	2,934,307	100.0%	100.0%	100.0%
10/1/2022	297,570	1,474,603	1,099,397	2,573,334	100.0%	100.0%	72.9%
10/1/2023	329,140	1,566,980	1,333,808	2,884,320	100.0%	100.0%	74.1%
POLICE OFFICERS AND FIREFIGHTERS' RETIREMENT PLAN							
10/1/2019	338,775	2,547,138	2,828,542	6,256,213	100.0%	100.0%	100.0%
10/1/2020	352,281	2,903,981	2,817,790	6,620,190	100.0%	100.0%	100.0%
10/1/2021	357,729	3,106,359	2,741,743	7,963,277	100.0%	100.0%	100.0%
10/1/2022	348,012	3,706,133	2,635,421	6,901,545	100.0%	100.0%	100.0%
10/1/2023	371,342	4,145,794	2,883,761	7,653,760	100.0%	100.0%	100.0%

($ in Thousands)

Appendix 3

Risk Measures

Pension plans are complicated financial instruments designed to provide income security for plan participants as they move through their working lives and into retirement. As such they can be subject to many different forces that can put the plan in better or worse positions over time. The primary risk that a plan sponsor incurs from a defined benefit plan is the risk of substantial increases in annual contributions.

The “maturity” level of a plan can indicate the likely sensitivity the plan will have to different events whether positive or negative. Variations in the investment returns are a common source of these types of events or shocks. Other sources might be experience that differs from that assumed, assumption changes or plan changes.

The purpose of this section is to provide the reader with a basic understanding of the fundamentals of pension financing and the associated risks, including implications of the Plan’s funding policy on future plan funding, how future experience may differ from the assumptions used, and the potential volatility of future measurements resulting from these differences.

Elements of Pension Plan Financing

The following equation lays out the fundamental elements of pension plan financing:

Contributions + Investment Returns = Benefit Payments + Expenses

Employers and employees **contribute** to a plan based on the statutory requirements, plan terms, and plan sponsor funding policy. The plan invests these contributions and earns a **return** on that investment. Together, these contributions and investment returns are the sole sources of income to the plan. **Benefits** are paid to participants who have met the eligibility and vesting requirements defined by the plan. Plans also pay administrative, investment, auditing, legal, and other **expenses** for maintaining the plan. **Over time, contributions and investment earnings must equal benefits and expenses.**

From this equation, it is evident that funding, investment, and benefit policies must be developed together. Once the benefit terms are established, each plan sponsor must determine the desired balance of contributions versus investment returns needed to finance benefits accrued to participants. It is important to remember that the plan sponsor’s investment and funding policies, along with the selected actuarial assumptions, determine the <u>assumed</u> balance between contributions and investment returns. **The <u>actual cost</u> of a plan is based on the <u>actual experience</u> of the plan and may result in a different balance than is assumed.** Ultimately, the expected return does not impact the long-term relationship between the contributions required and the benefit level that can be supported by such contributions. Using a higher or lower expected return assumption may give a incorrect sense of benefit security if the plan does not realize that level of actual returns over time.

The development of integrated benefit, funding, and investment policies generally requires consideration of many factors such as:

- Balancing benefit security and intergenerational equity;
- Risk appetite and ability to absorb short-term volatility in plan contributions;
- Current plan funded status;
- Timing and expected duration of benefit payments; and
- Nature and frequency of past and anticipated future plan amendments.

Significant Risks Affecting Pension Plans

Examples of risk common to most public plans include the following (generally listed from greatest to least risk):

- Investment risk**:** The potential that investment returns will be different than expected.

- Contribution risk: the potential that actual future contributions are not made in accordance with the plan's actuarially based funding policy.

- Longevity and other demographic risks: The potential that mortality or other demographic experience will be different than expected.

- Asset/liability mismatch risk: The potential that changes in the value of liabilities are not matched by changes in asset values.

- Cash flow risks: The potential that contributions to the plan will not cover benefit payments and expenses.

Investment risk is often the single most significant risk for defined benefit plans. Plans that seek a higher investment return are typically forced to accept a higher level of volatility that can change the plan's funded status drastically year-to-year. Use of an asset smoothing method that phases in investment gains and losses over a period of years can give the perception of less volatility in the funded status from year to year.

Contribution risk most commonly results from either large contribution increases that are difficult for the plan sponsor to meet, or from a material decrease in the number of covered employees and/or covered payroll.

Assumptions regarding mortality and other demographic factors related to participant behavior bring the risk that future experience will diverge from the reasonable assumptions utilized within the actuarial valuation model. For example, participants living longer than expected will increase plan costs, while people terminating sooner than expected will generally decrease plan costs. Additionally, what is considered a reasonable assumption may change over time and lead to an increase or decrease in future contributions. Since the start of the COVID-19 pandemic, there has been much discussion about how this event will affect longevity, both over the short-term and long-term, and how certain demographic groups may be impacted to a greater degree than others. Actual life expectancies may be longer or shorter than what is reflected in the valuation and benefit payment projections, and will increase or decrease the cost of the plan as actual experience emerges.

Asset/liability mismatch risk is also another potential risk for many pension plans. To the extent that the duration of plan assets is not matched to the duration of plan liabilities a change in discount rates could have an impact on the plan's funded status. For most public pension plans, changes in asset values and interest rates do not directly affect the measurement of the plan's liability.

As plans mature, they become more reliant on investment returns to pay benefits and expenses. When plans have negative cash flows, they must spend interest and dividends, or may be forced to sell assets at inopportune times, to meet those obligations.

One item left off this list is "interest rate risk" (i.e., the potential that interest rates will be different than expected). This risk is common in corporate ERISA plans where funding is based on bond rates. Interest rates on bonds are still an important consideration when setting an expected return assumption and can change over time, along with long-term capital market expectations. Together these may lead to a change in the interest rate used to value plan liabilities which will increase or decrease the measurement of plan liabilities and the actuarially determined contribution.

Quantifying Investment and Funded Status Risk

Although cash and money market funds have the lowest absolute investment risk, they are typically not the lowest risk investment for a pension plan. With respect to interest rate risk, a pension plan liability behaves like the price of a bond because both equal the discounted value of a series of future cash flows. The present value will change in the opposite direction to a change in interest rates. Therefore, a bond portfolio with the timing of expected income cash flows matched to the expected benefit payment outflows is typically the lowest risk investment approach for a pension plan.

Corporate, Treasury, and municipal bonds, often considered lower risk investment classes, can still have a high level of interest rate risk in their present values. If the duration (timing and pattern of income payments) of the fixed income assets are misaligned with the duration of the plan's liability, there can be significant funded status volatility as interest rates change. The way to mitigate this volatility is minimizing the asset/liability (or duration) mismatch risk.

One means of quantifying the expected cost of assuming future investment and asset/liability mismatch risk is to compare the Plan's current assets to a liability calculated assuming very low default risk. One such measure is called a **Low Default-Risk Obligation Measure** (LDROM). An example of an LDROM is the Plan's Funding Liability determined using a discount rate based on the yields on high quality municipal bonds, similar to what is referenced under GASB statement 68.

		Liability Measure	Assumed Return
Actuarial Liability – Funding Policy Return	$	10,588,624	6.25%
Actuarial Liability – Municipal Bond Yield (LDROM)	$	13,790,673	4.63%

The difference between the LDROM and the Actuarial Liability used to determine funding contributions can be viewed in several ways, and certain views of this measure may be more relevant for different plan sponsors:

- The expected long-term contribution savings to be achieved by investing in asset classes with higher expected risk and returns than bonds.

- The cost of investing in an all-bond portfolio and significantly lowering expected long-term investment returns in exchange for protecting the Plan's current funded status.

- A measure of the Plan's non-diversifiable investment risk.

Investors expect to be compensated for assuming risk when they make an investment. The risk premium of an investment is the return an asset is expected to generate in excess of the risk-free rate of return. The more risk assumed by the investor, the greater the return they expect to achieve in exchange for accepting that risk.

For plans whose assumed long-term rate of return on plan assets is greater than the municipal bond yield used for the LDROM calculation, the expected cost to the plan sponsor of funding the plan will be lower because of the greater level of investment risk accepted. This in turn leads to greater volatility in the plan's funded status because the actual return on plan investments is expected to vary considerably year-to-year. Conversely, if a plan has taken steps to reduce asset/liability mismatch risk the expected cost of contributions to fund the plan will be greater (if the plan is not already fully funded) and the volatility in the plan's funded status will be reduced.

Selecting the right level of investment risk (and associated asset/liability mismatch risk) for a plan requires complex analysis that goes beyond the scope of these basic disclosures. Included in any such analysis must be an evaluation of the plan sponsor's funding policy.

Risk Considerations in Assessing a Funding Policy

When assessing a plan's funding policy, two primary considerations are:

- whether the contributions are determined using reasonable and appropriate actuarial cost, amortization, and asset valuation methods (i.e., is the contribution an Actuarially Determined Contribution (ADC)), and
- the projected period until any Unfunded Actuarial Accrued Liability (UAAL) is fully amortized.

Under the current funding policy, the annual contribution is an ADC. The Plan's UAAL is required to be amortized over 20 years, with new layered amortization bases established annually.

Assuming all actuarial assumptions reflected in the annual valuation are met and the funding policy contributions are made as expected, this funding policy is expected to reduce the plan's UAAL in future years. The funding policy contribution is at least equal to the sum of the normal cost and interest on the UAAL. The effect of declining interest rates, investment losses, or other actuarial losses may offset the favorable effect of these contributions and cause the UAAL to remain steady or increase in future years.

Some examples of changes from year to year that will shorten or lengthen the period until the UAAL is fully amortized include:

Factors that Shorten the Amortization Period	Factors that Lengthen the Amortization Period
Contributing more than the ADC	Contributing less than the ADC
Investment and demographic gains	Investment and demographic losses
Increasing interest rates	Decreasing interest rates
Shorter life expectancies	Longer life expectancies
Reducing or eliminating future benefit accruals	Increasing benefit accruals (past and/or future)

Historical Plan Risk and Maturity Measures

While historical plan experience is no guaranteed predictor of the future, it can be informative in assessing the degree of risk and variability in the annual valuation results year-to-year, and in understanding how certain factors influence future outcomes.

There are several plan maturity measures that can be significant to understanding the risks associated with the plan and how they change over time. The following table shows four commonly used measures of the relative riskiness of a pension plan, relative to the plan sponsor and the employee group covered by the plan and how they have changed over time.

Teachers Risk Measure	10/1/2021	10/1/2022	10/1/2023	Conservative Measures
Retiree Liability as a Percent of Total Liability	42%	43%	40%	<50%
Assets to Payroll (Asset Volatility Ratio)	4.9	4.2	4.1	<5
Liabilities to Payroll (Liability Volatility Ratio)	4.5	4.7	4.6	<5
Benefit Payments to Contributions	0.8	0.8	1.0	<3

Police and Fire Risk Measure	10/1/2021	10/1/2022	10/1/2023	Conservative Measures
Retiree Liability as a Percent of Total Liability	49%	54%	55%	<50%
Assets to Payroll (Asset Volatility Ratio)	16.2	14.3	14.6	<5
Liabilities to Payroll (Liability Volatility Ratio)	12.5	13.8	14.0	<5
Benefit Payments to Contributions	1.1	1.2	1.7	<3

The Asset Volatility Ratio (AVR) is equal to the market value of assets (MVA) divided by payroll. A higher AVR implies that the Plan is exposed to greater contribution volatility. The current Teachers AVR of 4.1 indicates that a 1% asset gain/loss can be related to about 4.1% of the annual payroll. The current Police and Fire AVR of 14.6 indicates that a 1% asset gain/loss can be related to about 14.6% of the annual payroll. The Plan amortizes asset gains/losses over a period of 30 years since both plans currently have a surplus. This would result in a change in the District's contribution of about 0.3% of payroll for Teachers and 1.1% of payroll for Police and Fire for each 1.0% change in market assets in each Plan.

The Liability Volatility Ratio (LVR) is equal to the Actuarial Accrued Liability (AAL) divided by payroll. A higher LVR implies that the Plan is exposed to greater contribution volatility due to changes in liability measurements. The current Teachers LVR of 4.6 indicates that a 1% liability gain/loss can be related to about 4.6% of the annual payroll. The current Police and Fire LVR of 14.0 indicates that a 1% liability gain/loss can be related to about 14.0% of the annual payroll. The Plans amortize current surpluses over a period of 30 years. This would result in a change in the District's contribution of about 0.3% of payroll for Teachers and about 1.0% of payroll for Police and Fire for each 1.0% change in each Plan. Note, as a plan approaches a 100% funded level, the AVR will converge to the LVR.

The use of payroll in these risk measures is an easily available substitute for the employer's revenue and often reflects the employer's ability to afford the plan. Each of these measures is a measure of plan maturity. Some ratios are approaching or outside of the "conservative" range because the plans are becoming more mature. Mature plans present more risk to plan sponsors because changes to the liability or assets will result in large changes in the unfunded liability as compared to the overall size of the employer as measured by payroll.

Additional Review

In some instances, more detailed quantitative assessment of risks is warranted either by the above maturity metrics, part of a periodic self-assessment of risks, or due to changes in investment allocations and capital market assumptions. When risks are identified and discussed early, Plan Sponsors may have more options available to them to address those risks. As plans mature, however, certain tools become less effective for addressing potential future funding shortfalls.

The following are examples of tests that could be performed:

- Scenario Test—A process for assessing the impact of one possible event, or several simultaneously or sequentially occurring possible events, on a plan's financial condition. A scenario test could show, for example, the effect of a layoff or reduction in workforce, or early retirement program.

- Sensitivity Test—A process for assessing the impact of a change in an actuarial assumption on an actuarial measurement. A sensitivity analysis could demonstrate, for example, the impact of a decrease in the valuation discount rate or a change in future life expectancies.

- Stochastic Modeling—A process for generating numerous potential outcomes by allowing for random variations in one or more inputs over time for the purpose of assessing the distribution of those outcomes. This type of analysis could show, for example, a range of potential future contribution levels and the likelihood of contributions increasing to a certain level.

- Stress Test—A process for assessing the impact of adverse changes in one or relatively few factors affecting a plan's financial condition. A stress test could show, for example, the impact of a single year or period of several years with significant investment losses.

Appendix 4

D.C. Code §1-907.02(c) Adjustment to FY2025 Payment

Beginning in fiscal year 2001, the District payment was adjusted pursuant to D.C. Code §1-907.02(c). This section stipulates that "…the enrolled actuary shall determine whether the amount appropriated for the applicable fiscal year resulted in an overpayment or a shortfall based upon the actual covered payroll."

The D.C. Code §1-907.02(c) adjustment to the fiscal year 2025 District payment is calculated by taking the actual fiscal year 2023 covered payroll for each employee class and multiplying by the corresponding fiscal year 2023 contribution rates, which were determined as of October 1, 2021. This result is the fiscal year 2023 contribution that was required to be made by the District, based on actual payroll. The required contribution is then compared to the actual contribution that was paid by the District based on projected payroll. The difference between the required and actual contributions is the D.C. Code §1-907.02(c) adjustment. Any adjustment amount that cannot be used in a given year is carried forward to the next fiscal year.

The following table shows the D.C. Code §1-907.02(c) Adjustment to FY2025 Payment.

		Teachers	Police	Fire
1.	Actual FY2023 Covered Payroll	$ 704,605	$ 334,297	$ 181,169
2.	FY2023 Contribution Rate	7.03%	18.40%	15.05%
3.	Actual FY2023 Contribution Required	49,534	61,511	27,266
4.	Actual FY2023 Contribution Paid without Adjustment	43,913	61,338	26,971
5.	Preliminary D.C. Code §1-907.02(c) Adjustment to FY2025 Payment (3. - 4.)	5,621	173	295
6.	FY2023 Unrecognized Amount	0	0	0
7.	Final D.C. Code §1-907.02(c) Adjustment to FY2025 Payment (5. + 6.)	5,621	173	295
8.	Adjustment Applied to FY2025 Payment	$ 5,621	$ 173	$ 295
9.	Carryover Adjustment (7. - 8.)	0	0	0

($ in Thousands)

Appendix 5

Experience Gain/(Loss)

The following table shows the gain/(loss), or change in unfunded accrued liability, due to experience other than expected.

Experience Gain/(Loss)	Teachers	Police	Fire	Police and Fire	Total
Age & Service Retirements If members retire at older ages, there is a gain; if younger ages, a loss.	$ (1.7)	$ (11.9)	$ (3.8)	$ (15.7)	$ (17.4)
Disability Retirements If disability claims are less than assumed, there is a gain; if more claims, a loss.	0.5	(5.2)	0.5	(4.7)	(4.2)
Death-in Service Benefits If survivor claims are less than assumed, there is a gain; if more claims, there is a loss.	2.3	2.7	0.8	3.6	5.9
Withdrawal from Employment If more liabilities are released by withdrawals than assumed, there is a gain; if smaller releases, a loss.	(2.7)	(0.7)	0.5	(0.2)	(2.9)
Pay Increases If there are smaller pay increases than assumed, there is a gain; if greater increases, a loss.	(133.1)	(139.6)	(62.6)	(202.2)	(335.3)
New Members Additional unfunded actuarial accrued liability will produce a loss.	(37.6)	(4.8)	(2.1)	(6.8)	(44.4)
Investment Income If there is greater investment income than assumed, there is a gain; if less income, a loss.	(43.7)	(79.8)	(36.4)	(116.2)	(159.9)
Death after Retirement If retirees live longer than assumed, there is a loss; if not as long, a gain.	1.0	(4.3)	(3.1)	(7.4)	(6.5)
COLA/CPI If inflation is different than expected, gains or losses can occur.	(30.7)	(76.1)	(26.8)	(102.9)	(133.6)
Other Miscellaneous gains and losses resulting from data adjustments, timing of financial transactions, etc.	4.4	(4.4)	17.1	12.7	17.1
Gain/(Loss) During Year from Experience	(241.3)	(324.1)	(115.9)	(439.9)	(681.2)
Non-Recurring Items Adjustments for plan amendments, assumption changes, method changes or audit changes.	-	-	-	-	-
Composite Gain/(Loss) During Year	$ (241.3)	$ (324.1)	$ (115.9)	$ (439.9)	$ (681.2)

($ in Millions)

Appendix 6

Valuation Balance Sheet – Teachers

The following table shows the Teachers valuation balance sheet (present and prospective assets and the actuarial liabilities) as of October 1, 2023 which is presented in the DCRB ACFR.

Teachers Present and Prospective Assets		
Actuarial Value of Present Assets		$ 2,966,048,189
Present Value of Future Members' Contributions		483,704,170
Present Value of Future Employer Contributions		
Normal contributions	$ 351,389,580	
Unfunded accrued liability contributions	263,880,194	
Total Prospective Employer Contributions		615,269,774
Total Present and Prospective Assets		**$ 4,065,022,133**

Teachers Actuarial Liabilities		
Present Value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits		$ 1,305,419,543
Present Value of prospective benefits payable on account of inactive members		261,560,746
Present Value of prospective benefits payable on account of present active members		
Service retirement benefits	$ 2,006,065,969	
Disability retirement benefits	35,420,235	
Survivor benefits	19,676,320	
Separation benefits	436,879,320	
Total		2,498,041,844
Total Actuarial Liabilities		**$ 4,065,022,133**

Appendix 7

Valuation Balance Sheet – Police and Fire

The following table shows the Police and Fire valuation balance sheet (present and prospective assets and the actuarial liabilities) as of October 1, 2023 which is presented in the DCRB ACFR.

Police and Fire Combined Present and Prospective Assets		
Actuarial Value of Present Assets		$ 7,864,125,965
Present Value of Future Members' Contributions		458,809,076
Present Value of Future Employer Contributions		
Normal contributions	$ 1,777,335,009	
Unfunded accrued liability contributions	(505,430,436)	
Total Prospective Employer Contributions		1,271,904,573
Total Present and Prospective Assets		**$ 9,594,839,614**

Police and Fire Combined Actuarial Liabilities		
Present Value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits		$ 4,073,119,533
Present Value of prospective benefits payable on account of inactive members		72,674,674
Present Value of prospective benefits payable on account of present active members		
Service retirement benefits	$ 4,887,429,148	
Disability retirement benefits	214,180,860	
Survivor benefits	50,796,663	
Separation benefits	296,638,736	
Total		5,449,045,407
Total Actuarial Liabilities		**$ 9,594,839,614**

Bolton

DCRB DISTRICT OF COLUMBIA RETIREMENT BOARD

Understanding Actuarial Reports

December 19, 2023

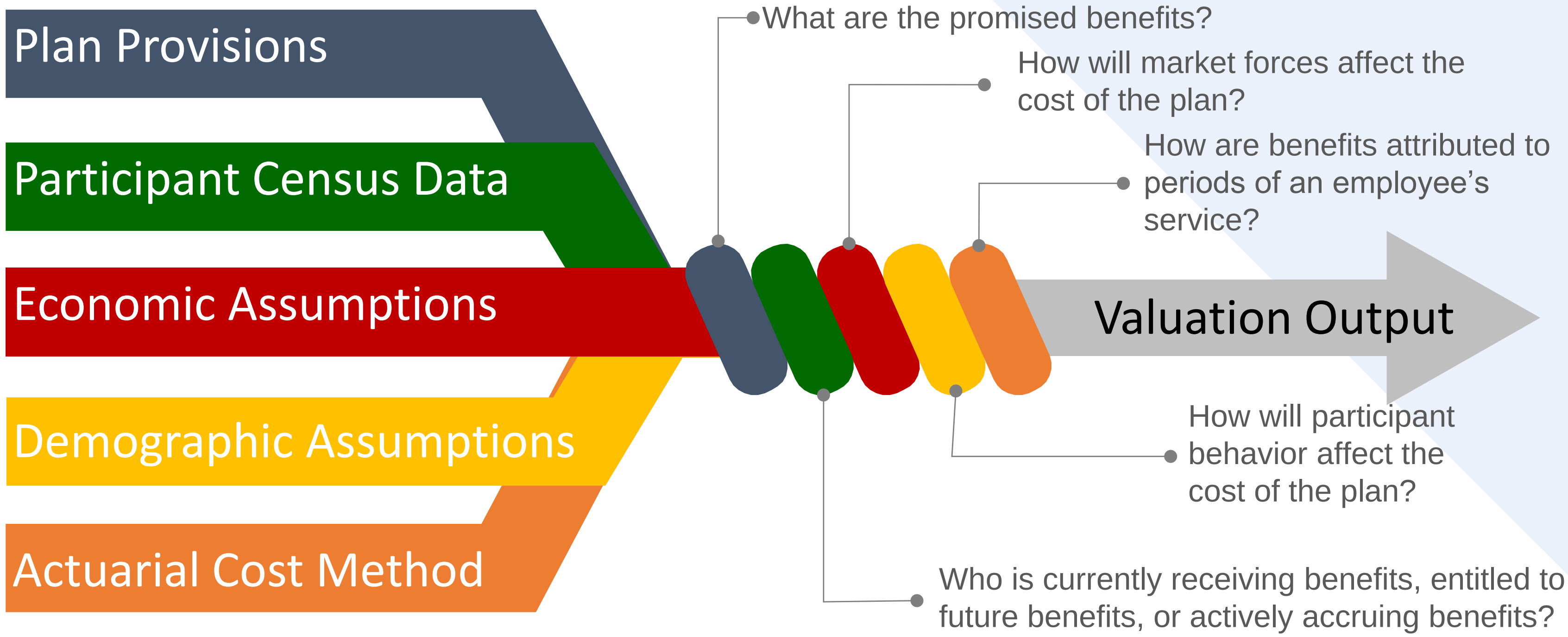
Thomas Vicente, Senior Consulting Actuary
Ann Sturner, Senior Consulting Actuary
Michelle Boyles, Consulting Actuary

Actuarial Flavors

- There are different kinds of actuaries who work with different products or lines of business
  - Pension
  - Other Post-Employment Benefits (OPEB)
  - Insurance
    - Employee Medical/Dental/Vision
    - Life
    - Property Casualty

- Pension actuarial reports have different purposes
  - Funding Valuation
  - Accounting Disclosure
  - Plan Design Changes
  - Solvency/Settlement

Actuarial Report Inputs



B

PVB or PVFB: Present Value of (Future) Benefits

- Actuary's estimate of the amount of money necessary to pay all benefits
  - Based on a cash flow stream until the last participant dies
  - Discounted to the valuation date
- Snapshot results as of the valuation date
  - Based on the current plan design
  - Does not include estimates for future hires
  - Does include estimates of future service and future pay increases
- Plan funded status not typically based on PVB
  - On average employees will typically work another 10 to 15 years before receiving benefits
  - Future service benefits for actives should be funded over this future service period

B

Actuarial Cost Method

- The method used to divide the PVB between the past, present and future
- Actuarial Accrued Liability
  - The portion of the PVB allocated to the past
  - Includes estimates of past service and future pay increases
  - Acronyms (AL, AAL, UAL, UAAL – the U is for unfunded)
- Normal (or Service) Cost
  - The portion of the PVB allocated to the current year's accrual
  - Includes estimate of current year service and future pay increases
  - Key item in reconciling AAL from year to year
- Present Value of Future Normal Cost
  - The portion of the PVB allocated to the future
- DCRB uses Entry Age Normal (EAN)
  - Level cost (individual) method
  - Normal cost is a level percentage of pay over working lifetime

B

Cost Method vs. Funding Method

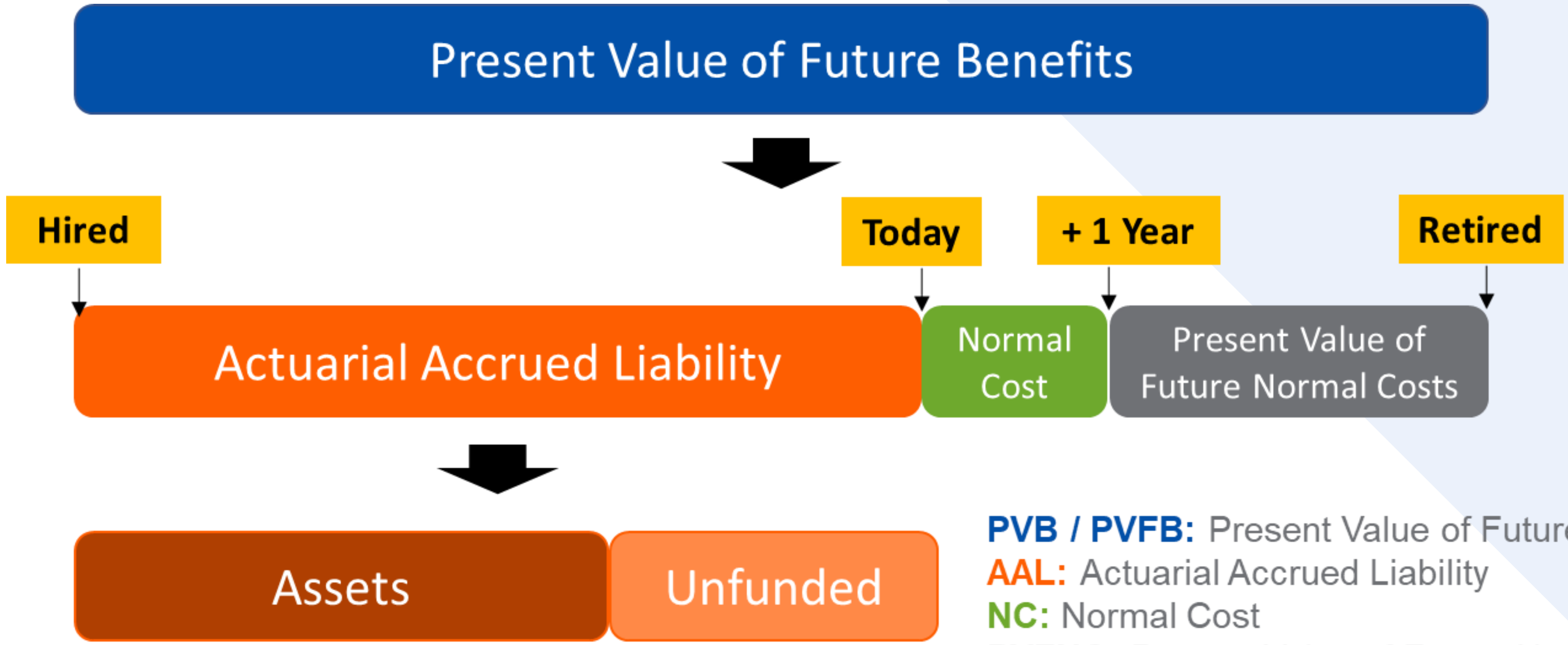
- When calculating an Actuarially Determined Contribution (ADC), a funding method must be defined
- Funding method is a combination of:
  - – Actuarial Cost Method
  - – Actuarial Value of Assets Method
    - Based on Market (Fair) Value
    - May allow for smoothing of gains and losses
    - May limit smoothed result to within a corridor around Market Value
  - – Amortization Method
    - To systematically account for payment of any Unfunded Actuarial Accrued Liability

Actuarially Determined Contribution (ADC)

Normal Cost + Expected Expenses + Amortization Payment = Actuarially Determined Contribution (ADC)

- Normal cost
  - Cost of benefits in upcoming year
  - May be viewed as “gross” and “net” for before and after expected employee contributions
- Expected expenses
  - Expected administrative expenses in upcoming year
- Amortization payment
  - Payment towards the unfunded liability or credit due to surplus
- Actuarially Determined Contribution (ADC)
  - Contribution amount for fiscal year that begins one year after the actuarial valuation date
  - For example, October 1, 2023 actuarial valuation provides the FYE2025 ADC

Quick Reference of Actuarial Jargon



The **Actuarial Cost Method** determines how the PVFB is allocated between the three main components.

PVB / PVFB: Present Value of Future Benefits
AAL: Actuarial Accrued Liability
NC: Normal Cost
PVFNC: Present Value of Future Normal Costs
MVA: Market Value of Assets
AVA: Actuarial Value of Assets
UAAL: Unfunded Actuarial Accrued Liability

A New Term for 2023

- Low Default Risk Obligation Measure (LDROM)
  - Value liabilities based on yields on low default risk investments
  - Generally produces a higher liability measure
  - Does not impact budget or accounting
- Actuaries are required to disclose starting in 2023

THANK YOU

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