



Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

Pension Funding Report
Ohio Police & Fire Pension Fund
Actuarial Valuation as of
January 1, 2023





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

November 1, 2023

Board of Trustees
Ohio Police & Fire Pension Fund
140 East Town Street
Columbus, Ohio 43215

Members of the Board:

Cavanaugh Macdonald (CMC) is pleased to present this report on the results of the actuarial valuation of the Ohio Police & Fire Pension Fund (OP&F). This report presents the results of the annual actuarial valuation of the assets and liabilities of OP&F as of January 1, 2023, prepared in accordance with Chapter 742 of the Ohio Revised Code (ORC), as amended by Senate Bill No. 340. The valuation takes into account all of the promised benefits to which members are entitled, including pension and survivor benefits.

The principal results of the valuation do not take into account Medicare Part B premium reimbursements or any other health care benefits. However, at the request of the Ohio Retirement Study Council (ORSC), supplemental results have been prepared that do take into account the liability for Medicare Part B premium reimbursements and are presented in Table 1A in the report.

The purpose of the valuation is to determine the financial status of OP&F on an actuarial basis. Use of this report for any other purpose may not be appropriate and may result in mistaken conclusions due to failure to understand applicable assumptions, methodologies, or inapplicability of the report for that purpose. CMC will not accept any liability for any statement made about the report without prior review by CMC.

Where presented, references to “funded ratio” and “unfunded accrued liability” typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities.



This report does not include accounting disclosure information under Governmental Accounting Standards Board (GASB) Statement Nos. 67 and 68. CMC will provide disclosure information under Statement Nos. 67 and 68 in a separate report after OP&F's 2023 year-end. CMC also prepares a separate valuation of OP&F retiree health care benefits.

The valuation was based on the actuarial assumptions and methods that have been adopted by the Board of Trustees, including a valuation interest rate of 7.50 percent per annum compounded annually. The assumptions were effective January 1, 2022 and recommended by the actuary based on a quinquennial experience review covering the period 2017-2021. The next experience review will cover the five-year period 2022-2026. Actuarial Standards of Practice require that the likelihood and extent of future mortality improvements be considered.

Assets and Membership Data

OP&F reported to the actuary the individual data for members as of the valuation date. While we did not verify the data at their source, we did perform tests for internal consistency and reasonableness. The amount of assets in the pension trust fund taken into account in the valuation was based on financial statements prepared for us by OP&F.

An assumption is made by CMC to account for salary adjustments reported by employers assumed to occur after the census information has been provided to CMC by OP&F.

Funding Objectives and Progress

The actuary uses an actuarial cost method to determine the portion of OP&F's liabilities accrued by the members as of the valuation date and the portion that is attributable to future years of service. The rate of contribution necessary to systematically fund the future service liabilities, the normal cost rate, is calculated under the cost method to be a level percentage of active member payroll. The portion of the liabilities accrued as of the valuation date, the actuarial accrued liability (AAL), is compared to a market-related, actuarial value of OP&F's assets. The amount of liabilities in excess of the assets is called the unfunded actuarial accrued liability (UAAL).

The actuary determines how many years are required by OP&F to completely amortize the UAAL (the funding period), using the member and employer contributions reduced by the amount allocated to health care and the amount of normal cost for the year. For 2003-2012, the funding period was infinite years, meaning the annual contribution toward the unfunded when compared to the unfunded amount was not sufficient to pay it off. As a result of benefit and member contribution changes under Senate Bill No. 340, changes to the DROP program, and a reduction in the contribution allocation to the Health Care Stabilization Fund by the Board of Trustees, and favorable asset investment gains, the pension funding period has decreased from 47 years as of January 1, 2013 to 28.07 years as of January 1, 2022. As of January 1, 2023, the funding period decreased to 26.71 years primarily due to deferred investment experience and payroll growth that was higher than anticipated.



Section 742.16 of the ORC, as adopted by Senate Bill No. 82, sets forth an objective that the funding period is no more than 30 years. If the funding period exceeds 30 years, a plan shall be developed and presented by the Board of Trustees to the ORSC to reduce the funding period to not more than 30 years. Section 742.14 of the ORC, as amended by Senate Bill No. 340, sets forth that the 30-year funding analysis be performed every three years and the 30-year funding plan, if necessary, be developed and presented not later than 90 days after the Board of Trustees' receipt of the actuarial valuation and 30-year funding analysis. The most recent triennial analysis is based on the January 1, 2022 actuarial valuation, and shows the funding period is 28.07 years, so no 30-year funding plan is required. The next analysis will be performed based on the January 1, 2025 actuarial valuation.

The funded ratio (i.e., the ratio of actuarial assets to the AAL) determined as of January 1, 2023 is 70.0 percent, compared to 69.7 percent as of as of January 1, 2022. If measured using the market value of assets, the funded ratio would be lower at 63.5 percent on account of net investment gains not yet reflected in the actuarial assets. Taking into account the AAL for Medicare Part B premium reimbursements, the funded ratio would be 69.4 percent using the actuarial assets and 62.9 percent using the market value of assets. The funded ratio is not intended to measure the adequacy of funding in any analysis of a possible settlement of plan liabilities.

Supporting Schedules and Certification

The valuation report shows detailed summaries of the financial results of the valuation and membership data used in preparing this valuation. The actuary prepared the following supporting schedules for inclusion in the Actuarial and Statistical Sections of the OP&F Comprehensive Annual Financial Report: Analysis of Financial Experience, Short-Term Solvency Test, Schedule of Funding Progress, Calculation of Actuarial Value of Assets, and Retirees and Beneficiaries Added to and Removed from the Rolls.

The valuation assumptions were chosen by the Board of Trustees with the advice of the actuary and first used in the January 1, 2022 valuation. The assumptions used to develop the January 1, 2023 valuation are individually reasonable and in combination represent our best estimate of anticipated experience under the plan.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. Because of limited scope, CMC performed no analysis of the potential range of such future differences.

During 2018 OP&F retained Cavanaugh Macdonald as their actuary. The January 1, 2019 valuation was the first valuation completed by Cavanaugh Macdonald. All results presented in this report for years prior to the December 31, 2018 were performed by the prior actuary(s).



Board of Trustees
November 1, 2023
Page 4

The consultants who worked on this assignment are pension actuaries. CMC's advice is not intended to be a substitute for qualified legal or accounting counsel.

This is to certify that the independent consulting actuaries are members of the American Academy of Actuaries, have experience in performing valuations for public retirement plans, and meet the qualification standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board and the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement plan and on actuarial assumptions that are internally consistent and reasonable based on the actual experience of the Fund and future expectations. However, the Board of Trustees has the final decision regarding the selection of the assumptions and adopted them as indicated in Appendix C.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'LL'.

Larry Langer, ASA, EA, FCA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Wendy Ludbrook'.

Wendy T. Ludbrook, FSA, EA, FCA, MAAA
Consulting Actuary

A handwritten signature in black ink, appearing to read 'Ryan Gundersen'.

Ryan Gundersen
Senior Consultant



TABLE OF CONTENTS

Executive Summary..... 1

Section I – Valuation Results

 Table 1 – Summary of Results of Actuarial Valuation as of January 1, 2023 8

 Table 1a – Valuation Results as of January 1, 2023 – Adjusted for Medicare Part B
 Reimbursement Liabilities.....10

 Table 2 – Summary of Market Value of Plan Assets as of December 31, 2022.....11

 Table 3 – Derivation of Actuarial Value of Assets as of January 1, 202312

 Table 4 – Analysis of Change in Unfunded Actuarial Accrued Liability as of January 1, 202313

 Table 5 – Detailed Analysis of Gains and Losses due to Plan Experience.....14

 Table 6 – Schedule of Funding Progress15

 Table 7 – Unfunded Actuarial Accrued Liability Funding Period.....16

 Table 8 – Solvency Test – Comparative Summary of Actuarial Accrued Liability and
 Actuarial Value of Assets17

Section II – Summary of Membership Data

 Table 9 – Summary of Membership Data as of January 1, 202318

 Table 10 – Active Membership Data as of January 1, 2023 – Number and Allowable
 Average Annual Salary.....21

 Table 11 – Retiree and Beneficiary Membership Data as of January 1, 2023 – Number and
 Annual Retirement Allowances.....24

 Table 12 – Retiree and Beneficiary Membership Data as of January 1, 2023 – Number and
 Average Annual Allowance.....27

 Table 13 – 10-Year History of Membership Data30

 Table 14 – Reconciliation of Membership Data from January 1, 2022 to January 1, 2023.....32

Section III – Risk Considerations

 Table 15 – Historical Asset Volatility Ratio.....37

 Table 16 – Historical Cash Flows.....38

 Table 17 – Liability Maturity Measurements39

Appendices

 Appendix A – Summary of Main Benefit Provisions40

 Appendix B – Statement of Actuarial Assumptions and Other Inputs55

 Appendix C – Detailed Tabulations of the Data64



EXECUTIVE SUMMARY

Introduction

This report presents the results of the actuarial valuation as of January 1, 2023 of pension benefits for the Ohio Police and Fire Pension Fund (OP&F).

The primary purposes of performing an actuarial valuation are to:

- Disclose certain liability and asset measures as of the valuation date,
- Determine the funding period for the unfunded actuarial accrued liability (UAAL), given the current statutory contribution rates,
- Compare the actual experience since the last valuation date to that expected, and
- Analyze and report on any trends in contributions, assets, and liabilities over the past several years.

The principal valuation results include:

- The funding period for the unfunded actuarial accrued liability as of January 1, 2023 is 26.71 years, given the current statutory contribution rates.
- The funded status of the Plan, determined as of January 1, 2023, based on the actuarial accrued liability and the actuarial value of assets as of that date, is 70.0 percent.
- There was an experience loss (actual experience was less favorable than anticipated by the assumptions) of \$174.1 million for the year ending December 31, 2022.
- We have updated the profile of new active members to maintain the same Police and Firefighter headcounts in the future and to only reflect the impact of the state subsidy paid in the current valuation year. The impact was an increase in the funding period of 0.35 years and no impact on the current funded status.

This valuation report does not contain information under GASB Statement Nos. 67 and 68. CMC will provide disclosure information under Statement Nos. 67 and 68 in a separate report after OP&F's 2023 year-end.

The valuation was completed based upon membership and financial data submitted by OP&F. Note that an assumption is made in the valuation for the impact of late reported salary adjustments from employers. Thus, any salary amounts shown in this report are the amounts reported to Cavanaugh Macdonald Consulting (CMC) by OP&F, increased by an assumed percentage (1.090 percent on the reported salaries for 2022).

A separate valuation, and report, is performed for all health care benefits provided by OP&F. However, at the request of the ORSC, this report includes a supplemental table, Table 1A, that discloses the combined valuation results if the normal cost and AAL for Medicare Part B premium reimbursements were included were included with the pension benefits.

Changes since Last Year

The plan provisions used in this valuation are unchanged from last year.

The assumptions used for the January 1, 2023 actuarial valuation are based on the quinquennial experience review prepared as of December 31, 2021 and adopted by the Board of Trustees on October 26, 2022 and the change in assumptions noted earlier to determine the funding period.



EXECUTIVE SUMMARY

Summarized below are the principal financial results for the OP&F Pension Fund based upon the actuarial valuation as of January 1, 2023. Comparable results from the January 1, 2022 valuation are also shown.

	January 1, 2023	January 1, 2022
Membership Data		
Active Members		
Number	29,931	29,384
Annualized Salaries	\$ 2,695,179,389	\$ 2,536,802,819
Average Pay	90,046	86,333
Membership Payroll	2,596,223,885	2,443,620,260
Retirees and Beneficiaries		
Number	30,963	30,560
Annual Allowances	\$ 1,305,894,266	\$ 1,250,972,851
Average Benefit Payment	42,176	40,935
Vested Former Members		
Number	280	257
Contribution Rates (as a Percentage of Payroll)		
Statutory Contribution Rates:		
Employer Average	21.71%	21.69%
Member	<u>12.25%</u>	<u>12.25%</u>
Total	33.96%	33.94%
Allocation of Employer Contribution Rate:		
Pension Contribution Rate:		
- Employer Normal Cost	4.11%	4.10%
- Accrued Liability Rate	<u>17.10%</u>	<u>17.09%</u>
-Total Employer Pension Rate	21.21%	21.19%
Health Care Contribution Rate	<u>0.50%</u>	<u>0.50%</u>
Total Employer Contribution Rate	21.71%	21.69%
Actuarial Funded Status		
Actuarial Accrued Liability (AAL)	\$ 25,363,420,384	\$ 24,517,577,785
Actuarial Assets	<u>17,758,763,990</u>	<u>17,095,829,803</u>
Unfunded Accrued Liability (UAAL)	7,604,656,394	7,421,747,982
Funded Ratio	70.0%	69.7%
Funding Period	26.71 Years	28.07 Years



EXECUTIVE SUMMARY

Actuarial Funded Status

OP&F's funded status is measured by comparing the actuarial value of assets with the AAL. The AAL is the present value of benefits attributed to past service under OP&F's funding method and reflects future assumed pay increases for active members. The actuarial value of assets is a market-related value of assets that defers recognition of any market returns that are greater than or less than the assumed investment return over four years. The use of this asset valuation method mitigates, or smooths, the impact of market fluctuations from year to year in the valuation assets. The asset valuation method includes a 20 percent corridor around the market value, so that the actuarial value must be no less than 80 percent and no greater than 120 percent of the market value of assets.

As of January 1, 2023, the AAL exceeds the actuarial value of assets, resulting in an unfunded actuarial accrued liability of \$7.6 billion. The funded ratio, which is the ratio of the actuarial assets to the AAL, is 70.0 percent. These figures are based on an actuarial value of assets of \$17.8 billion and an AAL of \$25.4 billion.

Reasons for Change in the Funded Ratio

The funded ratio increased from 69.7 percent as of January 1, 2022 to 70.0 percent as of January 1, 2023, an increase of 0.3 percentage points. The primary reasons for the increase are as follows:

	Increase or (Decrease)
Investment gain based on actuarial value of assets	0.2%
Net liability loss due to plan experience	-0.6%
Net liability gain due to contribution level	0.7%
Net liability loss due to assumption changes	<u>0.0%</u>
Net increase (decrease)	0.3%

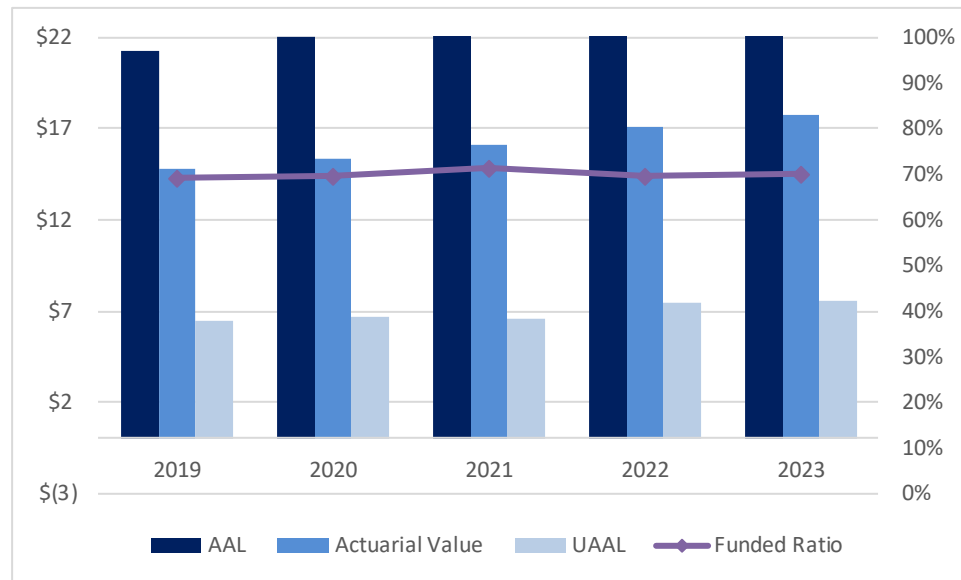
Five-Year History of Actuarial Funded Status

Valuation as of Jan. 1	Actuarial Accrued Liability (AAL)	Actuarial Assets	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio
2023	\$25,363,420,384	\$17,758,763,990	\$7,604,656,394	70.0%
2022	24,517,577,785	17,095,829,803	7,421,747,982	69.7%
2021	22,628,591,064	16,112,136,611	6,516,454,453	71.2%
2020	22,044,283,396	15,360,122,693	6,684,160,703	69.7%
2019	21,264,708,173	14,753,160,407	6,511,547,766	69.4%



EXECUTIVE SUMMARY

**Five-Year History of Liabilities, Assets and Funded Ratio
(in Billions)**



Net Actuarial Gain (Loss)

The valuation process uses many assumptions to estimate future benefit payments and the corresponding liability. If actual experience is more favorable than expected by the assumption, an actuarial gain occurs. Likewise, if actual experience is unfavorable compared to the assumption, an actuarial loss occurs. The actual experience measured in this valuation is that which occurred during the prior plan year (calendar year 2022). There was a net actuarial loss of \$174.1 million, consisting of a gain of \$47.7 million on the actuarial value of assets and a loss of \$221.8 million on liabilities. The asset gain reflects the investment performance on a portion of actual market experience during 2022 and the previous three years that is recognized in the January 1, 2023 actuarial value of assets. The analysis of the net experience gain/loss is shown in Table 5.

Five-Year History of Actuarial Gains or (Losses)

Fiscal Year Ended Dec. 31	Net Gain or (Loss)	As a % of AAL
2022	\$ (174,139,462)	-0.69%
2021	170,244,215	0.69%
2020	228,484,225	1.01%
2019	(119,437,850)	-0.54%
2018	(83,052,873)	-0.39%



EXECUTIVE SUMMARY

Rate of Return on Assets

The investment returns of the trust fund on a market value basis (i.e., total return including both realized and unrealized gains and losses) for years ended December 31, 2018 through December 31, 2022 are shown below. Also shown are the rates of return on the actuarial value of assets used to determine OP&F’s actuarial funded status.

Five-Year History of Rates of Return

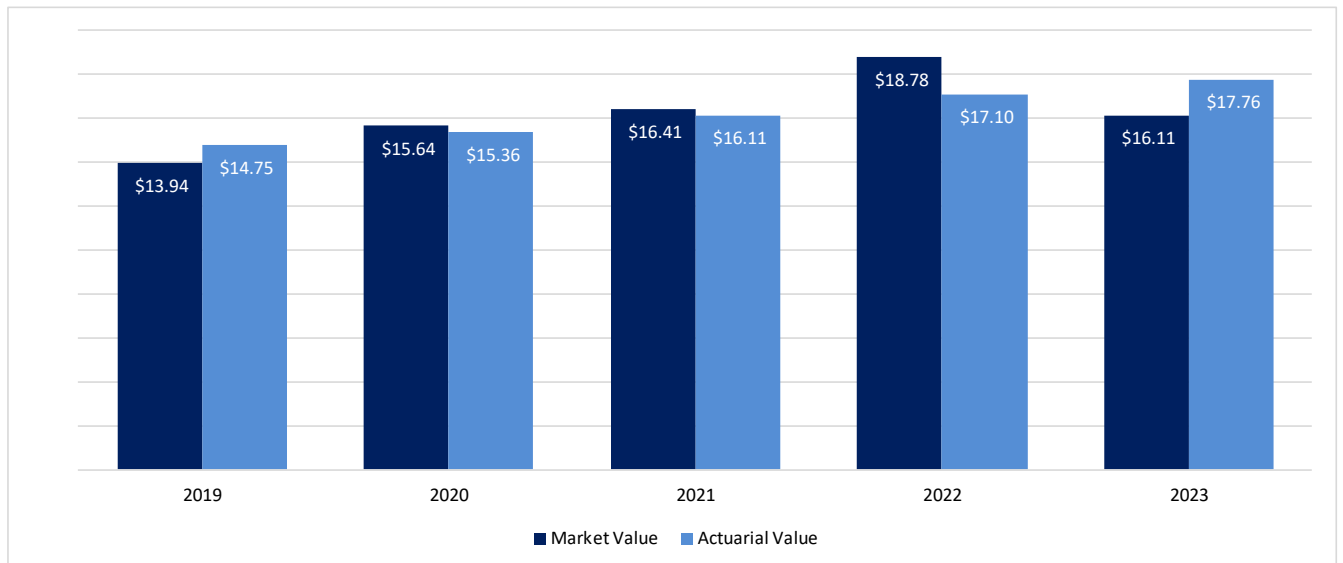
Year Ended Dec. 31	Rate of Return Based on:	
	Market Value*	Actuarial Value**
2022	-8.73%	7.78%
2021	20.48%	10.47%
2020	9.21%	8.89%
2019	17.89%	8.41%
2018	-1.78%	5.04%

* Rate of return, gross of fees, as reported in the OP&F ACFR

** Rate of return on actuarial value of assets is net of fees

Five-Year History of Market Value and Actuarial Assets as of January 1

(in Billions)





EXECUTIVE SUMMARY

Funding Period

The actuary determines how many years are required to fully amortize the UAAL (the funding period), using the combined member and employer contribution rates reduced by the amount allocated to fund health care benefits and the normal cost rate for the year. The calculation of the funding period takes into account future payroll growth, currently assumed at 3.25 percent per year. The calculation also considers future expected adjustments in the normal cost rate and changes in the statutory contribution rates as a result of Senate Bill No. 340.

The funding period, based on the January 1, 2023 valuation, is 26.71 years. This is the number of years it will take to pay off the \$7.6 billion UAAL as of January 1, 2023 if all assumptions are met. The funding period decreased from 28.07 years in the January 1, 2022 valuation primarily due to deferred investment experience and payroll growth that was higher than anticipated.

If all assumptions are met on an actuarial basis, the funding period will decrease each year. However, if all assumptions are not met, the period could increase. Two assumptions that greatly impact the funding period are investment returns and future payroll growth. OP&F experienced overall unfavorable investment results for 2022, but when combined with unrecognized favorable returns from 2019, 2020 and 2021 that were above the 8.00 expected return assumption for those years, the unfavorable results in 2022 were offset. All else being equal, if a 7.50 percent return is met on an actuarial basis in the future, the funding period will remain below 30 years. However, if a 7.50 percent return is met on an actuarial basis in the future, but payroll growth is less than 3.25 percent over time, then future contributions will be less than projected and may be insufficient to pay off the UAAL over 30 years.

	Increase or (Decrease)	Funding Period
January 1, 2022		28.07
Change in Funding Period due to:		
Expected experience	(6.30)	
Investment returns less than assumed	4.49	
Assumption Changes	0.35	
Payroll increasing more than expected	(1.40)	
Other experience	1.50	
Total		(1.36)
January 1, 2023		26.71

Five-Year History of Contribution Rates and Funding Period

Member contribution rates increased from 10.75 to 11.50 percent on July 2, 2014 and to 12.25 percent on July 2, 2015.

Valuation as of Jan 1,	Member	Contribution Rates			Allocation		Funding Period
		Police Employer	Fire Employer	Employer Average	Health Care	Pension	
2023	12.25%	19.50%	24.00%	21.71%	0.50%	33.46%	26.71 Years
2022	12.25%	19.50%	24.00%	21.69%	0.50%	33.44%	28.07 Years
2021	12.25%	19.50%	24.00%	21.66%	0.50%	33.41%	24.54 Years
2020	12.25%	19.50%	24.00%	21.63%	0.50%	33.38%	27.83 Years
2019	12.25%	19.50%	24.00%	21.62%	0.50%	33.37%	28.11 Years



SECTION I – VALUATION RESULTS

**TABLE 1
SUMMARY OF RESULTS OF THE ACTUARIAL VALUATION
AS OF JANUARY 1, 2023**

Item	Police	Firefighters	Total
Membership Data			
1. Number of Members			
a. Active Members			
i. Vested Actives	6,433	6,091	12,524
ii. Non-Vested Actives	9,008	8,399	17,407
iii. Total Actives	15,441	14,490	29,931
b. Vested Former Members	174	106	280
c. Rehired Retirees	171	83	254
d. Retirees and Disableds	13,162	9,947	23,109
e. Beneficiaries and Survivors	4,588	3,266	7,854
f. Contributions Refund Due	3,403	907	4,310
g. Total	36,939	28,799	65,738
2. Annualized Salaries	\$ 1,371,619,218	\$ 1,323,560,171	\$ 2,695,179,389
3. Membership Payroll	1,321,878,610	1,274,345,275	2,596,223,885
4. Annual Allowances	739,934,120	565,960,146	1,305,894,266
Valuation Results			
5. Present Value of Future benefits (PVFB)			
a. Active Members	\$ 7,279,226,148	\$ 7,229,151,763	\$ 14,508,377,911
b. Vested Former Members	31,573,432	19,263,519	50,836,951
c. Rehired Retirees	12,220,754	6,408,536	18,629,290
d. Retirees and Disableds	8,254,040,250	6,215,459,368	14,469,499,618
e. Beneficiaries and Survivors	463,886,829	311,989,572	775,876,401
f. Contributions Refund Due	52,845,340	17,970,737	70,816,077
g. Total PVFB	\$ 16,093,792,753	\$ 13,800,243,495	\$ 29,894,036,248
6. Normal Cost			
a. Normal Cost	\$ 208,830,189	\$ 203,881,689	\$ 412,711,878
b. Administrative Expenses	7,421,893	5,598,972	13,020,865
c. State Subsidy	88,429	66,710	155,139
d. Total: (a) + (b) - (c)	\$ 216,163,653	\$ 209,413,951	\$ 425,577,604
e. Normal Cost Rate: (d) / (3)	16.32%	16.40%	16.36%
7. Present Value of Future Normal Cost	\$ 2,194,892,017	\$ 2,322,034,259	\$ 4,516,926,276



SECTION I – VALUATION RESULTS

TABLE 1
SUMMARY OF RESULTS OF THE ACTUARIAL VALUATION
AS OF JANUARY 1, 2023 (continued)

Item	Police	Firefighters	Total
8. Actuarial Accrued Liability (AAL)			
a. Active Members	\$ 5,084,334,131	\$ 4,907,117,504	\$ 9,991,451,635
b. Vested Former Members	31,573,432	19,263,519	50,836,951
c. Rehired Retirees	12,220,754	6,408,536	18,629,290
d. Retirees and Disableds	8,254,040,250	6,215,459,368	14,469,499,618
e. Beneficiaries and Survivors	463,886,829	311,989,572	775,876,401
f. Contributions Refund Due	52,845,340	17,970,737	70,816,077
g. Total	\$ 13,898,900,736	\$ 11,478,209,236	\$ 25,377,109,972
h. Employer Accrued Liability	(7,717,956)	(5,971,632)	(13,689,588)
i. Adjusted AAL	\$ 13,891,182,780	\$ 11,472,237,604	\$ 25,363,420,384
9. Actuarial Value of Assets*	\$ 9,726,221,180	\$ 8,032,542,810	\$ 17,758,763,990
10. Unfunded Accrued Liability (8) - (9)	4,164,961,600	3,439,694,794	7,604,656,394
11. Funding Period			26.71
12. Funded Ratio	70.0%	70.0%	70.0%
Allocation of Employer Contribution Rate			
13. Employer Contribution Rate			
a. Total Employer Rate (by law)	19.50%	24.00%	21.71%
b. Health Care Stabilization Fund Allocation	<u>0.50%</u>	<u>0.50%</u>	<u>0.50%</u>
c. Employer Pension Rate: (a) - (b)	19.00%	23.50%	21.21%
d. Total Normal Cost Rate	16.32%	16.40%	16.36%
e. Member Rate (by law)	<u>12.25%</u>	<u>12.25%</u>	<u>12.25%</u>
f. Employer Normal Cost Rate: (d) - (e)	4.07%	4.15%	4.11%
g. Unfunded Accrued Liability			
Amortization Rate: (c) - (f)	14.93%	19.35%	17.10%

* The Actuarial Value of Assets is split between Police and Firefighters in proportion to the Actuarial Accrued Liability.



SECTION I – VALUATION RESULTS

TABLE 1A

VALUATION RESULTS AS OF JANUARY 1, 2023 ADJUSTED FOR MEDICARE PART B REIMBURSEMENT LIABILITIES*

Item	Police	Firefighters	Total
Valuation Results			
1. Present Value of Future benefits (PVFB)			
a. Pension Benefits	\$ 16,093,792,753	\$ 13,800,243,495	\$ 29,894,036,248
b. Medicare Part B Benefits	<u>140,151,928</u>	<u>118,937,296</u>	<u>259,089,224</u>
c. Total	\$ 16,233,944,681	\$ 13,919,180,791	\$ 30,153,125,472
2. Normal Cost			
a. Pension Benefits	16.32%	16.40%	16.36%
b. Medicare Part B Benefits	<u>0.07%</u>	<u>0.07%</u>	<u>0.07%</u>
c. Total	16.39%	16.47%	16.43%
3. Actuarial Accrued Liability (AAL)			
a. Pension Benefits	\$ 13,891,182,780	\$ 11,472,237,604	\$ 25,363,420,384
b. Medicare Part B Benefits	<u>131,771,799</u>	<u>109,910,943</u>	<u>241,682,742</u>
c. Total	\$ 14,022,954,579	\$ 11,582,148,547	\$ 25,605,103,126
4. Actuarial Value of Assets*	<u>\$ 9,726,221,180</u>	<u>\$ 8,032,542,810</u>	<u>\$ 17,758,763,990</u>
5. Unfunded Accrued Liability	4,296,733,399	3,549,605,737	7,846,339,136
6. Funded Ratio	69.4%	69.4%	69.4%
Allocation of Employer Contribution Rate			
7. Employer Contribution Rate			
a. Total Employer Rate (by law)	19.50%	24.00%	21.71%
b. Health Care Stabilization Fund Allocation	<u>0.50%</u>	<u>0.50%</u>	<u>0.50%</u>
c. Employer Pension Rate: (a) - (b)	19.00%	23.50%	21.21%
d. Pension Normal Cost Rate	16.32%	16.40%	16.36%
e. Medicare Part B Normal Cost Rate	<u>0.07%</u>	<u>0.07%</u>	<u>0.07%</u>
f. Employer Normal Cost Rate: (d) + (e)	16.39%	16.47%	16.43%
g. Member Rate (by law)	<u>12.25%</u>	<u>12.25%</u>	<u>12.25%</u>
h. Employer Normal Cost Rate: (f) - (g)	4.14%	4.22%	4.18%
i. Unfunded Accrued Liability Amortization Rate: (c) - (h)	14.86%	19.28%	17.03%

* The Actuarial Value of Assets is split between Police and Firefighters in proportion to the pension Actuarial Accrued Liability. While the Actuarial Accrued Liability and Normal Cost have been adjusted in this illustration to reflect the liability for Medicare Part B reimbursements, the Actuarial Value of Assets is unadjusted for any Health Care Stabilization Fund



SECTION I – VALUATION RESULTS

TABLE 2

SUMMARY OF MARKET VALUE OF PLAN ASSETS AS OF DECEMBER 31, 2022

Summary of Assets for Years Ending December 31,	2022	2021
1. Market Value of Assets as of January 1*	\$ 18,776,918,381	\$ 16,411,125,257
2. Contributions During Calendar Year		
a. Member	\$ 352,964,203	\$ 337,025,068
b. Employer	575,492,871	539,130,428
c. State Subsidy	182,678	205,237
d. Total	928,639,752	876,360,733
3. Benefit Payments During Calendar Year	\$ 1,559,456,438	\$ 1,535,344,021
4. Administrative Expenses During Calendar Year	\$ 12,672,374	\$ 9,609,702
5. Income During Calendar Year		
a. Interest, Dividends and Other Income	\$ 566,209,237	\$ 692,374,387
b. Appreciation/(Depreciation)	(2,537,410,795)	2,396,223,443
c. Investment Expenses	55,480,506	55,133,954
d. Investment Return After Expenses (a) + (b) - (c)	(2,026,682,064)	3,033,463,876
e. Other Income/Changes	827,043	922,238
f. Total Income (d) + (e)	(2,025,855,021)	3,034,386,114
6. Market Value of Assets as of December 31*	\$ 16,107,574,300	\$ 18,776,918,381
(1) + (2d.) - (3) - (4) + (5f.)		
7. Rate of Return	-10.98%	18.87%
(5d.) / [(1) + 0.5 * ((2d.) - (3) - (4) + (5e.))]		

*The Market Value of Assets includes the DROP accrual balances of \$2,000,847,817, \$1,895,907,467 and \$1,838,381,783 as of December 31, 2022, 2021 and 2020 respectively.



SECTION I – VALUATION RESULTS

TABLE 3

DERIVATION OF ACTUARIAL VALUE OF ASSETS AS OF JANUARY 1, 2023

					January 1, 2023	
1. Market Value of Assets as of December 31, 2022					\$ 16,107,574,300	
2. Determination of Deferred Gain (Loss)						
	Return on Market Value of Assets					
	Year	Actual	Expected	Gain/(Loss)	% Deferred	Deferred Amount
	2022	(\$2,026,682,064)	\$1,384,604,734	(\$3,411,286,798)	75%	(\$2,558,465,099)
	2021	3,033,463,876	1,286,183,190	1,747,280,686	50%	873,640,343
	2020	1,361,969,084	1,227,428,820	134,540,264	25%	33,635,066
	2019	2,304,356,918	1,090,925,194	1,213,431,724	0%	-
						(1,651,189,690)
3. Adjustment for 20% corridor						-
4. Actuarial Value of Assets as of January 1, 2023: (1) - (2) + (3)						\$ 17,758,763,990
5. Actuarial Rate of Return *						
a. Actuarial Value of Assets as of January 1, 2022						\$ 17,095,829,803
b. Contributions During 2022						928,639,752
c. Benefits Paid During 2022						1,559,456,438
d. Expenses During 2022						12,672,374
e. Other Income						827,043
f. Return on an Actuarial Basis						1,305,596,204
g. Actuarial Rate of Return: (f) / [(a) + 0.5 * ((b) - (c) - (d) + (e))]						7.78%

* The actuarial rate of return is the rate of return based on the change in the actuarial value of assets from last year to this year. The rate of return is calculated assuming contributions and disbursements occur halfway through the year.



SECTION I – VALUATION RESULTS

TABLE 4

**ANALYSIS OF CHANGE IN UNFUNDED ACTUARIAL ACCRUED LIABILITY
AS OF JANUARY 1, 2023**

		January 1, 2023
1. Unfunded Accrued Liability at January 1, 2022	\$	7,421,747,982
2. Contributions Toward Unfunded Accrued Liability		525,551,284
3. Interest Credit at 7.50% to December 31, 2022		537,279,214
4. Expected Unfunded Accrued Liability at December 31, 2022 (1)-(2)+(3)		7,433,475,912
5. Actual Unfunded Accrued Liability at January 1, 2023	\$	7,604,656,394
6. Net Gain (Loss) (4) - (5)	\$	(171,180,482)
7. Reasons for Net Gain (Loss)		
a. Experience Gains (Losses)		
i. Gain (Loss) from Investment Return on Actuarial Value of Assets	\$	47,741,204
ii. Gain (Loss) from Demographic Experience and Other	\$	(218,921,687)
iii. Gain (Loss) from Pay Load Adjustment for Late Reported Pays		(2,958,979)
iv. Subtotal		(174,139,462)
b. Gain (Loss) from Experience Study		-
c. Total	\$	(174,139,462)



SECTION I – VALUATION RESULTS

TABLE 5

DETAILED ANALYSIS OF GAINS AND LOSSES DUE TO PLAN EXPERIENCE RESULTING IN DIFFERENCES BETWEEN ASSUMED AND ACTUAL EXPERIENCE

Plan Experience	Gain / (Loss) for Year Ended January 1,				
	2023	2022	2021	2020	Total
Turnover If more liabilities are released by withdrawal separations from active membership than assumed, there is a gain. If smaller releases, there is a loss.	\$ 1,338,829	\$ (9,754,142)	\$ (9,775,170)	\$ (10,222,710)	\$ (28,413,193)
Retirement If members retire at older ages than assumed, there is a gain. If younger, there is a loss.	(7,484,302)	(137,740,378)	(77,855,153)	(61,852,611)	(284,932,444)
Death among retired members and beneficiaries If more deaths occur than assumed, there is a gain. If fewer deaths than assumed, there is a loss.	(1,171,798)	69,847,648	(23,792,783)	(32,634,935)	12,248,132
Disability retirements If disability claims are less than assumed, there is a gain. If more claims, a loss.	(7,360,552)	7,078,036	11,252,059	3,232,986	14,202,529
Salary increase/decrease If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	(102,820,417)	(130,527,044)	57,863,583	11,532,085	(163,951,793)
Return to work If participants return to work with previous service restored, there is a loss.	(2,094,240)	(2,100,859)	(1,684,844)	(1,089,645)	(6,969,588)
New Entrants If new entrants join OP&F, there is a loss.	(13,985,764)	(9,571,474)	(6,031,951)	(8,132,872)	(37,722,061)
Deaths among actives If claims costs are less than assumed, there is a gain. If more claims, a loss.	1,047,129	987,118	(469,122)	(539,065)	1,026,060
Other Experience and Payroll Growth If other experience, including less than expected payroll growth, increases the unfunded liability, there is a loss. Otherwise, there is a gain.	(86,390,573)	(4,362,503)	141,764,732	(68,637,374)	(17,625,718)
Net gain (or loss) during the year due to plan experience	\$ (218,921,688)	\$ (216,143,598)	\$ 91,271,351	\$ (168,344,141)	\$ (512,138,076)
Investment If there is greater investment return than assumed, there is a gain. If less return, a loss.	47,741,205	390,058,973	134,992,475	60,651,790	633,444,443
Net gain (or loss) during the year due to plan experience	\$ (171,180,483)	\$ 173,915,375	\$ 226,263,826	\$ (107,692,351)	\$ 121,306,367
Adjustment for Late Reported Pays Change in liability due to the pay being loaded to reflect late	(2,958,979)	(3,671,160)	2,220,399	(11,745,499)	(16,155,239)
Special Events Changes due to special events (2022 - Experience Study; 2019 - Change in Actuary)	-	(1,076,240,098)	-	-	(1,076,240,098)
Total gain (or loss) during the year	\$ (174,139,462)	\$ (905,995,883)	\$ 228,484,225	\$ (119,437,850)	\$ (971,088,970)



SECTION I – VALUATION RESULTS

TABLE 6

SCHEDULE OF FUNDING PROGRESS

Valuation as of Jan. 1	Valuation Assets	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL)	Ratio of Assets to AAL	Active Member Payroll	UAAL as a Percentage of Active Member Payroll
2023	\$ 17,758.8	\$ 25,363.4	\$ 7,604.7	70.0%	\$ 2,596.2	292.9%
2022	17,095.8	24,517.6	7,421.8	69.7%	2,443.6	303.7%
2021	16,112.1	22,628.6	6,516.5	71.2%	2,381.8	273.6%
2020	15,360.1	22,044.3	6,684.2	69.7%	2,313.6	288.9%
2019	14,753.2	21,264.7	6,511.5	69.4%	2,218.0	293.6%
2018	14,594.6	20,887.2	6,292.6	69.9%	2,209.3	284.8%
2017	14,162.5	20,290.4	6,127.9	69.8%	2,180.9	281.0%
2016	13,653.0	19,135.9	5,482.9	71.3%	2,060.9	266.1%
2015	13,029.3	18,395.6	5,366.3	70.8%	1,986.6	270.1%
2014	11,063.2	16,577.8	5,514.6	66.7%	1,942.3	283.9%

Note: Actuarial Assets and Liabilities prior to Jan. 1, 2015 are net of DROP balances.

Note: The amounts reported in this schedule do not include assets or liabilities for post-employment health care benefits.



SECTION I – VALUATION RESULTS

TABLE 7

UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)
FUNDING PERIOD AS OF JANUARY 1, 2023

Plan Year	UAAL as of January 1, Plan Year (a)	Development of Assumed Amortization Contribution Rate (b)								Projected Payroll ² (c)	Mid-Year Amortization Contribution Amount ³ (bviix x c) (d)	UAAL as of December 31,4 (e)	Year
		Employer Pension Plan Rate (bi)	Pension Normal Cost Rate (bii)	Administrative Expenses Rate (biii)	State Subsidies Rate (biv)	Normal Cost Rate (bii+biii+biv) (bv)	Member Contribution Rate (bvi)	Employer Normal Cost Rate (bv-bvi) (bvii)	Assumed Amortization Contribution Rate ¹ (bi-bvii) (bviii)				
2023	\$7,604,656,394	21.21%	15.90%	0.47%	-0.01%	16.36%	12.25%	4.11%	17.10%	\$2,782,772,719	\$475,883,187	\$7,681,599,433	1
2024	7,681,599,433	21.21%	15.90%	0.47%	0.00%	16.37%	12.25%	4.12%	17.09%	2,873,212,833	491,114,890	7,748,520,635	2
2025	7,748,520,635	21.22%	15.91%	0.46%	0.00%	16.37%	12.25%	4.12%	17.10%	2,966,592,250	507,226,382	7,803,756,177	3
2026	7,803,756,177	21.22%	15.92%	0.46%	0.00%	16.38%	12.25%	4.13%	17.09%	3,063,006,498	523,393,318	7,846,372,148	4
2027	7,846,372,148	21.22%	15.94%	0.46%	0.00%	16.40%	12.25%	4.15%	17.07%	3,162,554,209	539,970,627	7,874,996,597	5
2028	7,874,996,597	21.23%	15.95%	0.46%	0.00%	16.41%	12.25%	4.16%	17.07%	3,265,337,221	557,411,879	7,887,684,405	6
2029	7,887,684,405	21.23%	15.97%	0.45%	0.00%	16.42%	12.25%	4.17%	17.06%	3,371,460,680	575,039,356	7,883,047,241	7
2030	7,883,047,241	21.23%	15.98%	0.45%	0.00%	16.44%	12.25%	4.19%	17.04%	3,481,033,152	593,313,718	7,859,115,029	8
2031	7,859,115,029	21.23%	16.00%	0.45%	0.00%	16.45%	12.25%	4.20%	17.03%	3,594,166,730	612,199,652	7,813,806,547	9
2032	7,813,806,547	21.23%	16.01%	0.45%	0.00%	16.46%	12.25%	4.21%	17.02%	3,710,977,149	631,711,614	7,744,869,497	10
2033	7,744,869,497	21.22%	16.02%	0.45%	0.00%	16.47%	12.25%	4.22%	17.00%	3,831,583,906	651,510,833	7,650,233,901	11
2034	7,650,233,901	21.22%	16.04%	0.44%	0.00%	16.48%	12.25%	4.23%	16.99%	3,956,110,383	672,168,240	7,527,082,579	12
2035	7,527,082,579	21.21%	16.06%	0.44%	0.00%	16.50%	12.25%	4.25%	16.96%	4,084,683,970	692,717,508	7,373,388,974	13
2036	7,373,388,974	21.21%	16.08%	0.44%	0.00%	16.52%	12.25%	4.27%	16.94%	4,217,436,199	714,507,668	7,185,575,829	14
2037	7,185,575,829	21.21%	16.09%	0.44%	0.00%	16.53%	12.25%	4.28%	16.93%	4,354,502,876	737,133,502	6,960,217,734	15
2038	6,960,217,734	21.21%	16.11%	0.44%	0.00%	16.55%	12.25%	4.30%	16.91%	4,496,024,219	760,426,931	6,693,806,642	16
2039	6,693,806,642	21.21%	16.13%	0.43%	0.00%	16.56%	12.25%	4.31%	16.90%	4,642,145,006	784,333,546	6,382,627,812	17
2040	6,382,627,812	21.21%	16.15%	0.43%	0.00%	16.58%	12.25%	4.33%	16.88%	4,793,014,719	809,115,950	6,022,415,626	18
2041	6,022,415,626	21.21%	16.16%	0.43%	0.00%	16.59%	12.25%	4.34%	16.87%	4,948,787,698	834,755,166	5,608,604,220	19
2042	5,608,604,220	21.21%	16.18%	0.43%	0.00%	16.61%	12.25%	4.36%	16.85%	5,109,623,298	861,186,540	5,136,352,327	20
2043	5,136,352,327	21.21%	16.19%	0.42%	0.00%	16.62%	12.25%	4.37%	16.84%	5,275,686,055	888,677,509	4,600,178,299	21
2044	4,600,178,299	21.20%	16.20%	0.42%	0.00%	16.62%	12.25%	4.37%	16.83%	5,447,145,852	916,683,384	3,994,754,110	22
2045	3,994,754,110	21.20%	16.21%	0.42%	0.00%	16.63%	12.25%	4.38%	16.82%	5,624,178,092	945,997,792	3,313,529,281	23
2046	3,313,529,281	21.20%	16.22%	0.42%	0.00%	16.64%	12.25%	4.39%	16.81%	5,806,963,880	976,002,584	2,550,102,960	24
2047	2,550,102,960	21.20%	16.24%	0.42%	0.00%	16.66%	12.25%	4.41%	16.79%	5,995,690,206	1,006,706,826	1,697,584,829	25
2048	1,697,584,829	21.20%	16.27%	0.41%	0.00%	16.68%	12.25%	4.43%	16.77%	6,190,550,138	1,038,126,280	748,551,455	26
2049	748,551,455	21.20%	16.29%	0.41%	0.00%	16.71%	12.25%	4.46%	16.74%	6,391,743,017	1,070,175,674	-	27
2050	-	21.20%	16.33%	0.41%	0.00%	16.74%	12.25%	4.49%	16.71%	6,599,474,665	1,102,911,380	-	28
2051	-	21.20%	16.36%	0.41%	0.00%	16.77%	12.25%	4.52%	16.68%	6,813,957,592	1,136,674,217	-	29
2052	-	21.19%	16.39%	0.41%	0.00%	16.80%	12.25%	4.55%	16.64%	7,035,411,213	1,170,925,935	-	30

Funding Period is 26.71 years because the UAAL is first projected to be zero as of December 31 of year 27.

¹ The amortization contribution rate is the total statutory contribution rate, minus the total normal cost rate, minus the health care contribution rate. The statutory contribution rate is assumed to remain unchanged except for any legislated increases, for which none are assumed after the July 1, 2015 member contribution rate increase. The impact of SB 340 and changes adopted by OP&F that will impact new members will reduce the total normal cost rate over time, and, thus, increase the amortization contribution rate, as reflected above.

² Based on 3.25% payroll growth assumption

³ The contribution amount is the product of (b) the amortization contribution rate and (c) the assumed payroll amount.

⁴ The outstanding balance at the end of the year is derived from the outstanding balance at the beginning of the year with interest minus the mid-year amortization contribution with interest. (e) = [(a) x 1.075] - [(d) x 1.075^{0.5}]



SECTION I – VALUATION RESULTS

TABLE 8

SOLVENCY TEST – COMPARATIVE SUMMARY OF ACTUARIAL ACCRUED LIABILITY AND ACTUARIAL VALUE OF ASSETS

POLICE

Valuation as of January 1	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Member Employer Financed	Actuarial Value of Assets	Portion of Accrued Liability Covered by Valuation Assets		
					(1)	(2)	(3)
2023	1,770,848	\$8,717,927	\$3,402,408	\$9,726,221	100%	91%	0%
2022	1,733,321	8,320,429	3,396,237	9,378,524	100%	92%	0%
2021	1,703,012	7,687,534	3,015,833	8,833,660	100%	93%	0%
2020	1,650,362	7,361,618	3,077,379	8,423,682	100%	92%	0%
2019	1,584,057	7,107,922	2,987,107	8,102,788	100%	92%	0%
2018	1,515,993	6,870,423	3,138,109	8,052,548	100%	95%	0%
2017	1,451,473	6,576,192	3,184,383	7,825,895	100%	97%	0%
2016	1,386,649	6,085,896	3,002,889	7,473,979	100%	100%	0%
2015	1,210,400	5,857,146	3,015,390	7,141,575	100%	100%	2%
2014	1,171,496	5,368,637	2,583,711	6,088,816	100%	92%	0%

FIREFIIGHTERS

Valuation as of January 1	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Member Employer Financed	Actuarial Value of Assets	Portion of Accrued Liability Covered by Valuation Assets		
					(1)	(2)	(3)
2023	1,683,546	\$6,527,449	\$3,261,243	\$8,032,543	100%	97%	0%
2022	1,613,606	6,252,725	3,201,259	7,717,306	100%	98%	0%
2021	1,552,817	5,881,373	2,788,022	7,278,477	100%	97%	0%
2020	1,489,023	5,589,542	2,876,359	6,936,441	100%	97%	0%
2019	1,423,619	5,373,749	2,788,255	6,650,372	100%	97%	0%
2018	1,345,237	5,150,080	2,867,386	6,542,014	100%	100%	2%
2017	1,276,582	4,922,990	2,878,774	6,336,593	100%	100%	5%
2016	1,213,330	4,614,250	2,832,862	6,179,025	100%	100%	12%
2015	1,062,097	4,337,819	2,912,741	5,887,716	100%	100%	17%
2014	1,028,465	3,924,388	2,501,058	4,974,383	100%	100%	1%

TOTAL

Valuation as of January 1	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Member Employer Financed	Actuarial Value of Assets	Portion of Accrued Liability Covered by Valuation Assets		
					(1)	(2)	(3)
2023	3,454,394	\$15,245,376	\$6,663,651	\$17,758,764	100%	94%	0%
2022	3,346,928	14,573,154	6,597,498	17,095,830	100%	94%	0%
2021	3,255,829	13,568,907	5,803,855	16,112,137	100%	95%	0%
2020	3,139,385	12,951,161	5,953,738	15,360,123	100%	94%	0%
2019	3,007,676	12,481,671	5,775,362	14,753,160	100%	94%	0%
2018	2,861,230	12,020,503	6,005,495	14,594,562	100%	98%	0%
2017	2,728,055	11,499,182	6,063,157	14,162,488	100%	99%	0%
2016	2,599,979	10,700,146	5,835,751	13,653,004	100%	100%	6%
2015	2,272,497	10,194,965	5,928,131	13,029,291	100%	100%	9%
2014	2,199,961	9,293,025	5,084,769	11,063,199	100%	95%	0%

Note: Actuarial Assets and Liabilities prior to Jan. 1, 2015 are net of DROP balances



SECTION II – SUMMARY OF MEMBERSHIP DATA

TABLE 9

SUMMARY OF MEMBERSHIP DATA AS OF JANUARY 1, 2023

POLICE

Item	Male	Female	Total
Number of Members	13,639	1,802	15,441
Annual Salaries	\$ 1,220,719,058	\$ 150,900,161	\$ 1,371,619,218
Average Annual Salary	\$ 89,502	\$ 83,740	\$ 88,830
Average Age	41.0	38.4	40.7
Average Service	13.5	10.6	13.2

FIREFIIGHTERS

Item	Male	Female	Total
Number of Members	13,894	596	14,490
Annual Salaries	\$ 1,275,671,535	\$ 47,888,636	\$ 1,323,560,171
Average Annual Salary	\$ 91,815	\$ 80,350	\$ 91,343
Average Age	41.3	36.7	41.1
Average Service	13.7	7.9	13.5

TOTAL

Item	Male	Female	Total
Number of Members	27,533	2,398	29,931
Annual Salaries	\$ 2,496,390,593	\$ 198,788,797	\$ 2,695,179,389
Average Annual Salary	\$ 90,669	\$ 82,898	\$ 90,046
Average Age	41.2	38.0	40.9
Average Service	13.6	9.9	13.3



SECTION II – SUMMARY OF MEMBERSHIP DATA

TABLE 9

**SUMMARY OF MEMBERSHIP DATA AS OF JANUARY 1, 2023
(continued)**

POLICE

Item	Male	Female	Total
Eligible for Allowances	158	16	174
Eligible for Refunds Only	<u>2,886</u>	<u>517</u>	<u>3,403</u>
Total	3,044	533	3,577

FIREFIGHTERS

Item	Male	Female	Total
Eligible for Allowances	96	10	106
Eligible for Refunds Only	<u>818</u>	<u>89</u>	<u>907</u>
Total	914	99	1,013

TOTAL

Item	Male	Female	Total
Eligible for Allowances	254	26	280
Eligible for Refunds Only	<u>3,704</u>	<u>606</u>	<u>4,310</u>
Total	3,958	632	4,590



SECTION II – SUMMARY OF MEMBERSHIP DATA

TABLE 9

SUMMARY OF MEMBERSHIP DATA AS OF JANUARY 1, 2023
(continued)

POLICE

Item	Number	Annual Allowance	Average Allowance	Average Age
Service Retirees	9,982	\$ 537,960,446	\$ 53,893	68.0
Survivors and Beneficiaries	4,588	55,409,352	12,077	71.8
Disability Retirees	3,351	146,564,322	43,737	65.5
Total	17,921	\$ 739,934,120	\$ 41,289	68.5

FIREFIIGHTERS

Item	Number	Annual Allowance	Average Allowance	Average Age
Service Retirees	7,666	\$ 415,944,734	\$ 54,258	68.8
Survivors and Beneficiaries	3,266	39,730,449	12,165	73.9
Disability Retirees	2,364	110,284,962	46,652	67.4
Total	13,296	\$ 565,960,146	\$ 42,566	69.8

TOTAL

Item	Number	Annual Allowance	Average Allowance	Average Age
Service Retirees	17,648	\$ 953,905,180	\$ 54,052	68.3
Survivors and Beneficiaries	7,854	95,139,801	12,114	72.7
Disability Retirees	5,715	256,849,285	44,943	66.3
Total	31,217	\$ 1,305,894,266	\$ 41,833	69.1



SECTION II – SUMMARY OF MEMBERSHIP DATA

TABLE 10

ACTIVE MEMBERSHIP DATA AS OF JANUARY 1, 2023
POLICE

Age	Years of Service									Total	
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Up		
Under 25	747 \$61,513	- \$0	- \$0	- \$0	- \$0	- \$0	- \$0	- \$0	- \$0	- \$0	747 \$61,513
25-29	1,847 \$68,981	340 \$85,313	- \$0	- \$0	- \$0	- \$0	- \$0	- \$0	- \$0	- \$0	2,187 \$71,520
30-34	1,087 \$70,486	1,287 \$87,119	170 \$97,495	- \$0	1 \$102,636	- \$0	- \$0	- \$0	- \$0	- \$0	2,545 \$80,714
35-39	476 \$68,807	798 \$87,227	745 \$95,281	249 \$105,190	- \$0	- \$0	- \$0	- \$0	- \$0	- \$0	2,268 \$87,979
40-44	176 \$67,076	288 \$87,599	412 \$93,813	778 \$101,470	257 \$106,365	2 \$121,006	- \$0	- \$0	- \$0	- \$0	1,913 \$95,246
45-49	94 \$64,780	84 \$79,829	184 \$88,153	403 \$97,205	934 \$104,804	288 \$110,810	1 \$120,182	- \$0	- \$0	- \$0	1,988 \$99,653
50-54	50 \$65,321	59 \$79,025	78 \$90,050	262 \$94,704	641 \$98,231	1,057 \$108,166	258 \$110,700	1 \$104,728	- \$0	- \$0	2,406 \$102,131
55-59	25 \$62,900	14 \$77,103	24 \$79,827	73 \$93,495	174 \$94,050	374 \$105,652	370 \$107,193	25 \$100,969	1 \$113,200	1 \$101,454	1,080 \$101,454
60-64	2 \$70,029	6 \$73,262	7 \$89,470	24 \$85,755	37 \$87,611	78 \$94,169	93 \$99,633	8 \$108,822	1 \$252,875	1 \$94,688	256 \$94,688
Over 64	2 \$51,551	1 \$61,078	5 \$65,187	3 \$85,648	3 \$65,947	19 \$96,432	12 \$92,115	2 \$100,977	4 \$90,354	4 \$87,174	51 \$87,174
TOTAL	4,506 \$67,844	2,877 \$86,518	1,625 \$93,737	1,792 \$99,477	2,047 \$101,659	1,818 \$107,359	734 \$107,239	36 \$102,819	6 \$121,249	6 \$88,830	15,441 \$88,830

Note: Excludes rehired retirees.



SECTION II – SUMMARY OF MEMBERSHIP DATA

TABLE 10

**ACTIVE MEMBERSHIP DATA AS OF JANUARY 1, 2023
FIREFIGHTERS'**

Age	Years of Service									Total	
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Up		
Under 25	813 \$62,862	3 \$69,195	- \$0	- \$0	- \$0	- \$0	- \$0	- \$0	- \$0	- \$0	816 \$62,886
25-29	1,355 \$69,859	316 \$87,310	- \$0	- \$0	- \$0	- \$0	- \$0	- \$0	- \$0	- \$0	1,671 \$73,159
30-34	1,001 \$70,244	1,010 \$88,819	172 \$93,050	- \$0	- \$0	- \$0	- \$0	- \$0	- \$0	- \$0	2,183 \$80,635
35-39	537 \$71,379	844 \$90,248	695 \$97,360	201 \$102,627	2 \$97,585	- \$0	- \$0	- \$0	- \$0	- \$0	2,279 \$89,069
40-44	193 \$69,301	371 \$87,859	546 \$97,346	643 \$100,802	308 \$109,067	1 \$120,194	- \$0	- \$0	- \$0	- \$0	2,062 \$95,854
45-49	65 \$65,211	109 \$85,442	180 \$94,291	418 \$101,679	841 \$108,074	272 \$111,410	6 \$120,337	- \$0	- \$0	- \$0	1,891 \$103,089
50-54	38 \$65,179	21 \$92,358	64 \$100,087	225 \$93,649	655 \$104,955	772 \$109,816	266 \$117,384	2 \$87,702	- \$0	- \$0	2,043 \$106,126
55-59	12 \$64,751	13 \$93,849	20 \$87,569	58 \$89,260	227 \$100,707	412 \$106,167	372 \$110,112	51 \$120,121	- \$0	- \$0	1,165 \$105,249
60-64	4 \$66,591	4 \$100,725	11 \$88,817	21 \$84,301	63 \$106,569	123 \$103,497	108 \$106,242	11 \$105,064	4 \$86,650	4 \$86,650	349 \$102,685
Over 64	- \$0	1 \$85,613	1 \$111,304	5 \$79,671	6 \$87,704	13 \$117,612	4 \$103,593	1 \$57,293	- \$0	- \$0	31 \$100,713
TOTAL	4,018 \$68,578	2,692 \$88,867	1,689 \$96,530	1,571 \$99,530	2,102 \$106,339	1,593 \$108,727	756 \$112,165	65 \$115,609	4 \$86,650	4 \$86,650	14,490 \$91,343

Note: Excludes rehired retirees.



SECTION II – SUMMARY OF MEMBERSHIP DATA

TABLE 10
ACTIVE MEMBERSHIP DATA AS OF JANUARY 1, 2023
TOTAL

Age	Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Up	
Under 25	1,560	3	-	-	-	-	-	-	-	1,563
	\$62,216	\$69,195	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$62,230
25-29	3,202	656	-	-	-	-	-	-	-	3,858
	\$69,353	\$86,275	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$72,230
30-34	2,088	2,297	342	-	1	-	-	-	-	4,728
	\$70,370	\$87,867	\$95,260	\$0	\$102,636	\$0	\$0	\$0	\$0	\$80,678
35-39	1,013	1,642	1,440	450	2	-	-	-	-	4,547
	\$70,171	\$88,780	\$96,285	\$104,045	\$97,585	\$0	\$0	\$0	\$0	\$88,525
40-44	369	659	958	1,421	565	3	-	-	-	3,975
	\$68,240	\$87,745	\$95,827	\$101,168	\$107,838	\$120,735	\$0	\$0	\$0	\$95,561
45-49	159	193	364	821	1,775	560	7	-	-	3,879
	\$64,957	\$82,999	\$91,188	\$99,483	\$106,353	\$111,102	\$120,314	\$0	\$0	\$101,328
50-54	88	80	142	487	1,296	1,829	524	3	-	4,449
	\$65,260	\$82,525	\$94,574	\$94,217	\$101,629	\$108,863	\$114,093	\$93,377	\$0	\$103,966
55-59	37	27	44	131	401	786	742	76	1	2,245
	\$63,500	\$85,166	\$83,346	\$91,620	\$97,818	\$105,922	\$108,657	\$113,821	\$113,200	\$103,423
60-64	6	10	18	45	100	201	201	19	5	605
	\$67,737	\$84,247	\$89,071	\$85,076	\$99,555	\$99,877	\$103,184	\$106,646	\$119,895	\$99,301
Over 64	2	2	6	8	9	32	16	3	4	82
	\$51,551	\$73,345	\$72,873	\$81,912	\$80,451	\$105,036	\$94,985	\$86,416	\$90,354	\$92,292
TOTAL	8,524	5,569	3,314	3,363	4,149	3,411	1,490	101	10	29,931
	\$68,190	\$87,654	\$95,160	\$99,502	\$104,030	\$107,998	\$109,738	\$111,050	\$107,409	\$90,046

Note: Excludes rehired retirees.



SECTION II – SUMMARY OF MEMBERSHIP DATA

TABLE 11

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
POLICE

Group	Number	Annual Allowances as of January 1, 2023		
		Basic	Cost-of-Living Increases	Total
Service Retirees				
Males	9,282	\$ 369,586,183	\$ 130,603,461	\$ 500,189,644
Females	<u>700</u>	<u>29,884,169</u>	<u>7,886,632</u>	<u>37,770,802</u>
Subtotal	9,982	\$ 399,470,353	\$ 138,490,094	\$ 537,960,446
Survivors and Beneficiaries				
Males	246	\$ 1,028,334	\$ 545,411	\$ 1,573,744
Females	<u>4,342</u>	<u>33,196,384</u>	<u>20,639,223</u>	<u>53,835,607</u>
Subtotal	4,588	\$ 34,224,718	\$ 21,184,634	\$ 55,409,352
Disability Retirees				
Males	2,837	\$ 86,808,706	\$ 38,057,256	\$ 124,865,962
Females	<u>514</u>	<u>15,532,653</u>	<u>6,165,708</u>	<u>21,698,361</u>
Subtotal	3,351	\$ 102,341,359	\$ 44,222,963	\$ 146,564,322
Grand Total	17,921	536,036,429	203,897,691	739,934,120



SECTION II – SUMMARY OF MEMBERSHIP DATA

TABLE 11

**RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
FIREFIGHTERS'**

Group	Number	Annual Allowances as of January 1, 2023		
		Basic	Cost-of-Living Increases	Total
Service Retirees				
Males	7,563	\$ 302,191,414	\$ 108,215,076	\$ 410,406,490
Females	<u>103</u>	<u>4,631,461</u>	<u>906,783</u>	<u>5,538,244</u>
Subtotal	7,666	\$ 306,822,875	\$ 109,121,859	\$ 415,944,734
Survivors and Beneficiaries				
Males	133	\$ 351,502	\$ 191,560	\$ 543,063
Females	<u>3,133</u>	<u>24,334,359</u>	<u>14,853,027</u>	<u>39,187,386</u>
Subtotal	3,266	\$ 24,685,861	\$ 15,044,588	\$ 39,730,449
Disability Retirees				
Males	2,247	\$ 74,685,450	\$ 30,905,767	\$ 105,591,217
Females	<u>117</u>	<u>3,611,784</u>	<u>1,081,961</u>	<u>4,693,746</u>
Subtotal	2,364	\$ 78,297,234	\$ 31,987,728	\$ 110,284,962
Grand Total	13,296	409,805,970	156,154,175	565,960,146



SECTION II – SUMMARY OF MEMBERSHIP DATA

TABLE 11

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
TOTAL

Group	Number	Annual Allowances as of January 1, 2023		
		Basic	Cost-of-Living Increases	Total
Service Retirees				
Males	16,845	\$ 671,777,597	\$ 238,818,538	\$ 910,596,135
Females	803	34,515,631	8,793,415	43,309,046
Subtotal	17,648	\$ 706,293,228	\$ 247,611,953	\$ 953,905,180
Survivors and Beneficiaries				
Males	379	\$ 1,379,836	\$ 736,971	\$ 2,116,807
Females	7,475	57,530,743	35,492,251	93,022,994
Subtotal	7,854	\$ 58,910,579	\$ 36,229,222	\$ 95,139,801
Disability Retirees				
Males	5,084	\$ 161,494,156	\$ 68,963,023	\$ 230,457,179
Females	631	19,144,437	7,247,669	26,392,106
Subtotal	5,715	\$ 180,638,593	\$ 76,210,692	\$ 256,849,285
Grand Total	31,217	945,842,400	360,051,866	1,305,894,266



SECTION II – SUMMARY OF MEMBERSHIP DATA

TABLE 12

**RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
POLICE**

Age Last Birthday	Number	Annual Allowance	Average Annual Allowance
Service Retirees			
Under 60	2,205	\$ 111,489,339	\$ 50,562
60-64	1,607	89,305,944	55,573
65-69	1,863	107,151,864	57,516
70-74	1,689	96,728,918	57,270
75-79	1,377	76,914,908	55,857
Over 79	1,241	56,369,473	45,423
Total	9,982	\$ 537,960,446	\$ 53,893
Survivors and Beneficiaries			
Under 60	686	\$ 6,689,912	\$ 9,752
60-64	294	4,103,663	13,958
65-69	489	6,713,480	13,729
70-74	757	10,097,251	13,339
75-79	736	9,112,289	12,381
Over 79	1,626	18,692,757	11,496
Total	4,588	\$ 55,409,352	\$ 12,077
Disability Retirees			
Under 60	1,090	\$ 44,864,554	\$ 41,160
60-64	421	20,065,842	47,662
65-69	534	25,716,753	48,159
70-74	537	24,675,219	45,950
75-79	445	19,528,310	43,884
Over 79	324	11,713,644	36,153
Total	3,351	\$ 146,564,322	\$ 43,737



SECTION II – SUMMARY OF MEMBERSHIP DATA

TABLE 12

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
FIREFIGHTERS'

Age Last Birthday	Number	Annual Allowance	Average Annual Allowance
Service Retirees			
Under 60	1,209	\$ 61,424,993	\$ 50,806
60-64	1,604	90,212,214	56,242
65-69	1,589	93,458,693	58,816
70-74	1,258	72,587,083	57,700
75-79	918	49,186,302	53,580
Over 79	1,088	49,075,449	45,106
Total	7,666	\$ 415,944,734	\$ 54,258
Survivors and Beneficiaries			
Under 60	465	\$ 4,958,940	\$ 10,664
60-64	189	2,750,521	14,553
65-69	267	3,756,945	14,071
70-74	384	5,173,744	13,473
75-79	492	6,166,094	12,533
Over 79	1,469	16,924,205	11,521
Total	3,266	\$ 39,730,449	\$ 12,165
Disability Retirees			
Under 60	584	\$ 25,252,032	\$ 43,240
60-64	319	15,591,776	48,877
65-69	405	20,702,027	51,116
70-74	418	20,736,100	49,608
75-79	318	14,982,754	47,116
Over 79	320	13,020,274	40,688
Total	2,364	\$ 110,284,962	\$ 46,652



SECTION II – SUMMARY OF MEMBERSHIP DATA

TABLE 12

**RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
TOTAL**

Age Last Birthday	Number	Annual Allowance	Average Annual Allowance
Service Retirees			
Under 60	3,414	\$ 172,914,332	\$ 50,649
60-64	3,211	179,518,158	55,907
65-69	3,452	200,610,557	58,114
70-74	2,947	169,316,001	57,454
75-79	2,295	126,101,210	54,946
Over 79	<u>2,329</u>	<u>105,444,922</u>	<u>45,275</u>
Total	17,648	\$ 953,905,180	\$ 54,052
Survivors and Beneficiaries			
Under 60	1,151	\$ 11,648,852	\$ 10,121
60-64	483	6,854,184	14,191
65-69	756	10,470,425	13,850
70-74	1,141	15,270,995	13,384
75-79	1,228	15,278,382	12,442
Over 79	<u>3,095</u>	<u>35,616,962</u>	<u>11,508</u>
Total	7,854	\$ 95,139,801	\$ 12,114
Disability Retirees			
Under 60	1,674	\$ 70,116,587	\$ 41,886
60-64	740	35,657,618	48,186
65-69	939	46,418,780	49,434
70-74	955	45,411,319	47,551
75-79	763	34,511,064	45,231
Over 79	<u>644</u>	<u>24,733,918</u>	<u>38,407</u>
Total	5,715	\$ 256,849,285	\$ 44,943



SECTION II – SUMMARY OF MEMBERSHIP DATA

TABLE 13

**10 YEAR HISTORY OF MEMBERSHIP DATA
ACTIVE MEMBERS**

Valuation as of Jan. 1,	Number of Members*	Percentage Change in Membership	Valuation Membership Payroll	Percentage Change in Payroll**
2023	29,931	1.86%	\$ 2,695,179	6.24%
2022	29,384	0.84%	2,536,803	5.06%
2021	29,138	(0.69%)	2,414,537	2.07%
2020	29,340	1.51%	2,365,612	4.28%
2019	28,904	1.75%	2,268,611	3.82%
2018	28,408	0.83%	2,185,127	1.46%
2017	28,175	1.99%	2,153,765	4.51%
2016	27,624	(0.52%)	2,060,851	3.74%
2015	27,769	0.59%	1,986,569	2.28%
2014	27,605		1,942,269	

* Excludes rehired retirees

** Increase for 2021 and 2022 includes assumed increases for late reported salaries of 1.191% and 1.090% respectively



SECTION II – SUMMARY OF MEMBERSHIP DATA

TABLE 13

10 YEAR HISTORY OF MEMBERSHIP DATA
RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM THE ROLLS

Year Ended Dec. 31,	Added to Rolls		Removed from Rolls		Number on Rolls End of Year	Annual Allowances	Percentage Change in Allowances	Average Annual Allowances	Percentage Change in Membership
	Number	Annual Allowances	Number	Annual Allowances					
2022	1,677	\$ 90,752	1,259	\$ 35,878	31,217	\$ 1,305,894	4.39%	\$ 41.83	1.36%
2021	1,755	91,332	1,328	39,601	30,799	1,251,020	4.31%	40.62	1.41%
2020	1,550	79,764	1,169	31,201	30,372	1,199,289	4.22%	39.49	1.27%
2019	1,552	73,909	1,127	29,045	29,991	1,150,725	4.06%	38.37	1.44%
2018	1,292	66,129	1,087	28,036	29,566	1,105,862	3.57%	37.40	0.70%
2017	1,458	50,476	1,010	24,321	29,361	1,067,769	4.53%	36.37	1.55%
2016	1,401	47,436	890	21,186	28,913	1,021,509	4.67%	35.33	1.80%
2015	1,450	48,864	1,011	22,141	28,402	975,929	4.81%	34.36	1.57%
2014	1,261	41,378	859	17,204	27,963	931,176	4.59%	33.30	1.46%
2013	1,362	44,842	1,044	23,851	27,561	890,288	4.42%	32.30	1.17%



SECTION II – SUMMARY OF MEMBERSHIP DATA

TABLE 14

RECONCILIATION OF MEMBERSHIP DATA FROM
JANUARY 1, 2022 TO JANUARY 1, 2023
POLICE

	Active Members	Vested Former Members	Rehired Retirees	Disableds	Service Retirees	Beneficiaries	Total
As of January 1, 2022	15,420	165	159	3,426	9,474	4,610	33,254
Changes in Status							
a) Retirements	(592)	(9)	-	-	601	-	-
b) Disabilities	(46)	(2)	-	48	-	-	-
c) Death With Beneficiary	(9)	-	-	(54)	(158)	285	64
d) Death Without Beneficiary	(2)	(1)	(1)	(70)	(121)	(273)	(468)
e) Non-Vested Termination	(255)	-	-	-	-	-	(255)
f) Vested Termination	(30)	30	-	-	-	-	-
g) Rehired Retirees	(17)	-	17	-	-	-	-
h) Return to Work	62	(7)	-	-	-	-	55
i) Cessation of Benefits/Cash-out	(277)	(2)	(7)	-	-	(31)	(317)
j) Data Corrections	44	-	3	1	15	(3)	60
Total Changes in Status	(1,122)	9	12	(75)	337	(22)	(861)
New Entrants During the Year	1,143	-	-	-	-	-	1,143
Net Change	21	9	12	(75)	337	(22)	282
As of January 1, 2023	15,441	174	171	3,351	9,811	4,588	33,536



SECTION II – SUMMARY OF MEMBERSHIP DATA

TABLE 14

RECONCILIATION OF MEMBERSHIP DATA FROM
JANUARY 1, 2022 TO JANUARY 1, 2023
FIREFIGHTERS'

	Active Members	Vested Former Members	Rehired Retirees	Disableds	Service Retirees	Beneficiaries	Total
As of January 1, 2022	13,964	92	75	2,406	7,335	3,314	27,186
Changes in Status							
a) Retirements	(438)	(12)	-	-	450	-	-
b) Disabilities	(34)	(1)	-	35	-	-	-
c) Death With Beneficiary	(8)	-	-	(49)	(105)	212	50
d) Death Without Beneficiary	(7)	-	-	(29)	(93)	(239)	(368)
e) Non-Vested Termination	(81)	-	-	-	-	-	(81)
f) Vested Termination	(31)	31	-	-	-	-	-
g) Rehired Retirees	(7)	-	7	-	-	-	-
h) Return to Work	53	(3)	-	-	-	-	50
i) Cessation of Benefits/Cash-out	(105)	(1)	(2)	-	(1)	(20)	(129)
j) Data Corrections	(15)	-	3	1	(3)	(1)	(15)
Total Changes in Status	(673)	14	8	(42)	248	(48)	(493)
New Entrants During the Year	1,199	-	-	-	-	-	1,199
Net Change	526	14	8	(42)	248	(48)	706
As of January 1, 2023	14,490	106	83	2,364	7,583	3,266	27,892



SECTION II – SUMMARY OF MEMBERSHIP DATA

TABEL 14

RECONCILIATION OF MEMBERSHIP DATA FROM
JANUARY 1, 2022 TO JANUARY 1, 2023
TOTAL

	Active Members	Vested Former Members	Rehired Retirees	Disableds	Service Retirees	Beneficiaries	Total
As of January 1, 2022	29,384	257	234	5,832	16,809	7,924	60,440
Changes in Status							
a) Retirements	(1,030)	(21)	-	-	1,051	-	-
b) Disabilities	(80)	(3)	-	83	-	-	-
c) Death With Beneficiary	(17)	-	-	(103)	(263)	497	114
d) Death Without Beneficiary	(9)	(1)	(1)	(99)	(214)	(512)	(836)
e) Non-Vested Termination	(336)	-	-	-	-	-	(336)
f) Vested Termination	(61)	61	-	-	-	-	-
g) Rehired Retirees	(24)	-	24	-	-	-	-
h) Return to Work	115	(10)	-	-	-	-	105
i) Cessation of Benefits/Cash-out	(382)	(3)	(9)	-	(1)	(51)	(446)
j) Data Corrections	29	-	6	2	12	(4)	45
Total Changes in Status	(1,795)	23	20	(117)	585	(70)	(1,354)
New Entrants During the Year	2,342	-	-	-	-	-	2,342
Net Change	547	23	20	(117)	585	(70)	988
As of January 1, 2023	29,931	280	254	5,715	17,394	7,854	61,428



RISK CONSIDERATIONS

Actuarial Standards of Practice are issued by the Actuarial Standards Board and are binding on credentialed actuaries practicing in the United States. These standards generally identify what the actuary should consider, document and disclose when performing an actuarial assignment. In November, 2018, Actuarial Standard of Practice Number 51, *Assessment and Disclosure of Risk in Measuring Pension Obligations*, (ASOP 51) was issued as final with application to measurement dates on or after November 1, 2018. This ASOP, which applies to funding valuations, actuarial projections, and actuarial cost studies of proposed plan changes, is first applicable for the January 1, 2019 actuarial valuation for OP&F.

A typical retirement plan faces many different risks, but the greatest risk is the inability to make benefit payments when due. If plan assets are depleted, benefits may not be paid which could create legal and litigation risk or the plan could become “pay as you go”. The term “risk” is most commonly associated with an outcome with undesirable results. However, in the actuarial world, risk is translated into uncertainty. The actuarial valuation process uses many actuarial assumptions to project how future contributions and investment returns will meet the cash flow needs for future benefit payments. Of course, we know that actual experience will not unfold exactly as anticipated by the assumptions and that uncertainty, whether favorable or unfavorable, creates risk. ASOP 51 defines risk as the potential of actual future measurements to deviate from expected results due to actual experience that is different than the actuarial assumptions.

The various risk factors for a given plan can have a significant impact – good or bad – on the actuarial projection of liability and contribution rates.

There are a number of risks inherent in the funding of a defined benefit plan. These include:

- economic risks, such as investment return and inflation;
- demographic risks such as mortality, payroll growth, aging population including impact of baby boomers, and retirement ages;
- contribution risk, i.e., the potential for contribution rates to be too high for the plan sponsor/employer to pay and
- external risks such as the regulatory and political environment.

There is a direct correlation between healthy, well-funded retirement plans and consistent contributions equal to the full actuarial contribution rate each year.



SECTION III – RISK CONSIDERATIONS

RISK CONSIDERATIONS

In an actuarially funded plan, the most significant risk factor is investment return because of the volatility of returns and the size of plan assets compared to payroll (see Exhibit I). A perusal of historical returns over 10-20 years reveals that the actual return each year is rarely close to the average return for the same period. This is an expected result given the underlying capital market assumptions and the plan's asset allocation.

The following exhibits summarize some historical information that helps indicate how certain key risk metrics have changed over time.



TABLE 15

HISTORICAL ASSET VOLATILITY RATIOS

As a retirement system matures, the size of the market value of assets increases relative to the covered payroll of active members, on which the Fund is funded. The size of the plan assets relative to covered payroll, sometimes referred to as the asset volatility ratio, is an important indicator of the contribution risk for the Fund. The higher this ratio, the more sensitive a plan’s contribution rate is to investment return volatility. In other words, it will be harder to recover from investment losses with increased contributions.

Valuation Date	Market Value of Assets	Covered Payroll	Asset Volatility Ratio
January 1, 2013	\$ 11,840,698,340	\$ 1,913,382,667	6.19
January 1, 2014	13,166,077,870	1,942,269,436	6.78
January 1, 2015	13,453,447,836	1,986,568,535	6.77
January 1, 2016	12,923,943,156	2,060,850,584	6.27
January 1, 2017	13,682,389,240	2,144,265,467	6.38
January 1, 2018	14,963,614,004	2,174,667,031	6.88
January 1, 2019	13,941,056,807	2,268,610,714	6.15
January 1, 2020	15,636,590,807	2,365,611,876	6.61
January 1, 2021	16,411,125,257	2,414,537,420	6.80
January 1, 2022	18,776,918,381	2,536,802,819	7.40
January 1, 2023	16,107,574,300	2,695,179,389	5.98

The assets on January 1, 2023 are 598% of payroll so underperforming the investment return assumption by 1% (i.e., earn 6.50% for one year) is equivalent to 5.98% of payroll. While the actual impact in the first year is mitigated by the asset smoothing method and amortization of the UAL, this illustrates the risk associated with volatile investment returns.



SECTION III – RISK CONSIDERATIONS

TABLE 16

HISTORICAL CASH FLOWS

Plans with negative cash flows will experience increased sensitivity to investment return volatility. Cash flows, for this purpose, are measured as contributions less benefit payments. If the Fund has negative cash flows and then experiences returns below the assumed rate, there are fewer assets to be reinvested to earn the higher returns that typically follow. While any negative cash flow will produce such a result, it is typically a negative cash flow of more than 5% of MVA that causes significant concerns.

Year Ended	Market Value of Assets	Contributions	Benefit Payments	Net Cash Flow	Net Cash Flow as a Percent of MVA
December 31, 2012	\$ 11,840,698,340	\$ 464,867,162	\$ (1,075,411,270)	\$ (610,544,108)	-5.16%
December 31, 2013	11,920,512,944	537,635,922	(1,110,987,128)	(573,351,206)	-4.81%
December 31, 2014	13,453,447,836	642,482,523	(1,126,154,321)	(483,671,798)	-3.60%
December 31, 2015	12,923,943,156	674,807,572	(1,170,476,866)	(495,669,294)	-3.84%
December 31, 2016	13,682,389,240	723,737,827	(1,187,020,466)	(463,282,639)	-3.39%
December 31, 2017	14,963,614,004	744,400,996	(1,256,254,446)	(511,853,450)	-3.42%
December 31, 2018	13,941,056,807	774,068,159	(1,314,608,496)	(540,540,337)	-3.88%
December 31, 2019	15,636,590,807	805,717,452	(1,394,027,927)	(588,310,475)	-3.76%
December 31, 2020	16,411,125,257	831,059,129	(1,400,413,884)	(569,354,755)	-3.47%
December 31, 2021	18,776,918,381	876,360,733	(1,535,344,021)	(658,983,288)	-3.51%
December 31, 2022	16,107,574,300	928,639,752	(1,559,456,438)	(630,816,686)	-3.92%



TABLE 17

LIABILITY MATURITY MEASUREMENTS

Most public sector retirement systems have been in operation for many years. As a result, they have aging plan populations indicated by an increasing ratio of retirees to active members and a growing percentage of retiree liability. The retirement of the remaining baby boomers over the next decade is expected to further exacerbate the aging of the retirement system population. With more of the total liability residing with retirees, investment volatility has a greater impact on the funding of the Fund since it is more difficult to restore the system financially after losses occur when there is comparatively less payroll over which to spread costs.

Projections provide the most effective way of analyzing the impact of these changes on future funding measures but studying several key metrics from the valuation can also provide some valuable insight.

Valuation Date	Retiree Liability	Total Actuarial Liability	Retiree Percentage	Covered Payroll	Ratio
January 1, 2013	\$ 9,435,779,283	\$ 17,245,751,991	54.71%	\$ 1,913,382,667	9.01
January 1, 2014	9,799,718,068	17,823,319,753	54.98%	1,942,269,436	9.18
January 1, 2015	10,194,964,890	18,395,592,476	55.42%	1,986,568,535	9.26
January 1, 2016	10,700,145,394	19,135,875,916	55.92%	2,060,850,584	9.29
January 1, 2017	11,499,181,496	20,290,393,633	56.67%	2,144,265,467	9.46
January 1, 2018	12,020,502,851	20,887,227,279	57.55%	2,174,667,031	9.60
January 1, 2019	12,481,671,003	21,264,708,173	58.70%	2,268,610,714	9.37
January 1, 2020	12,951,160,675	22,044,283,396	58.75%	2,365,611,876	9.32
January 1, 2021	13,568,906,986	22,628,591,064	59.96%	2,414,537,420	9.37
January 1, 2022	14,573,153,650	24,517,577,785	59.44%	2,536,802,819	9.66
January 1, 2023	15,245,376,019	25,363,420,384	60.11%	2,596,223,885	9.32



APPENDIX A

SUMMARY OF MAIN BENEFIT PROVISIONS

The following is intended to summarize the key provisions valued in this valuation. Members of OP&F and other parties should not rely on this summary as a substitute for or legal interpretation of the laws and rules covering this retirement plan.

Membership

Membership in OP&F is mandatory under Ohio Law for all full-time police officers employed by Ohio municipalities and appointed under the required statutory provisions. Membership is also mandatory for all full-time firefighters employed by Ohio municipalities, townships, villages, joint fire districts or other political subdivisions. In order to become members of OP&F, full-time firefighters are required to satisfactorily complete, or have satisfactorily completed, a firefighter training course approved under former Section 3303.07, Section 4765.55 or conducted under Section 3737.33 of the ORC.

Eligibility for Membership

Full-time police officers or firefighters are eligible for membership in OP&F immediately upon commencement of employment as a full-time police officer or firefighter.

Contributions

Employer and member contributions are established by statute and both are due monthly. Employers of police officers pay 19.5 percent of salary; employers of firefighters pay 24 percent of salary. The member contribution rate equaled 12.25 percent in 2023.

Employer Contribution Rates – Percentage of Active Member Payroll:

Time Frame of Rates	Police	Fire
Jan 1, 1986 thru Present	19.50%	24.00%

Member Contribution Rates – Percentage of Active Member Payroll:

Time Frame of Rates	Police	Fire
July 2, 2015 and Thereafter	12.25%	12.25%



Benefits

Service Retirement

Upon attaining a qualifying age with sufficient years of service, a member of OP&F may retire and receive a lifetime monthly pension. OP&F offers four types of service retirement: normal, service commuted, age/service commuted and actuarially reduced. Each type has different eligibility guidelines and is calculated using the member's average annual salary.

Since average annual salary is subject to certain statutory and administrative limitations, not all salary, earnings, or compensation may be used in the calculation. OP&F calculates allowable average annual salary as follows:

- For OP&F members with 15 or more years of service credit as of July 1, 2013, average annual salary is an average of the three years of highest allowable earnings, regardless of when in their career the highest years occurred.
- For OP&F members with less than 15 years of service credit as of July 1, 2013, average annual salary is an average of the five years of highest allowable earnings, regardless of when in their career the highest years occurred.
- A “salary benchmark” is established for members with 15 or more years of service credit as of July 1, 2013, under which certain increases are excluded from salary for the purpose of determining allowable average annual salary. This benchmarking does not apply to members with less than 15 years of service credit as of July 1, 2013.

Normal Service Retirement

Eligibility

For members hired into an OP&F-covered position after July 1, 2013, minimum retirement age is 52 with at least 25 years of service credit.

For members hired into an OP&F-covered position on or before July 1, 2013, minimum retirement age is 48 with 25 years of service credit.



APPENDIX A – SUMMARY OF MAIN BENEFIT PROVISIONS

Benefit

An annual pension equal to a percentage of the allowable average annual salary. The percentage equals 2.5 percent for each of the first 20 years of service, 2.0 percent for each of the next five years of service, and 1.5 percent for each year of service in excess of 25 years. The maximum pension of 72 percent of the allowable average annual salary is paid after 33 years of service.

Service Commuted Retirement

Eligibility

For members hired into an OP&F-covered position after July 1, 2013, the minimum retirement age is 52, they must have at least 15 years of service credit and 25 years have elapsed from the date of their full-time hire.

For members hired into an OP&F-covered position on or before July 1, 2013, the minimum retirement age is 48, they must have at least 15 years of service credit and 25 years have elapsed from the date of their full-time hire.

Benefit

An annual pension equal to 1.5 percent of the allowable average annual salary multiplied by the number of full years of service credit (up to 25 years of service credit).

Age/Service Commuted Retirement

Eligibility

Age 62, 15 years of service credit and still working as a full-time police officer or firefighter.

Benefit

An annual pension that uses the same formula as for the Normal Service Retirement benefit (up to 25 years of service credit).

Actuarially Reduced

Eligibility

For members hired into an OP&F-covered position after July 1, 2013, age 48 with 25 years of service.

Benefit

An annual pension reduced to the actuarial equivalent of the amount payable had the member retired at age 52.



Rights Upon Separation From Service

Deferred Pension

If a member meets the years of service credit required for any of the service retirement pensions but leaves service before attaining the minimum retirement age, a pension becomes payable upon attainment of the qualifying age and filing the appropriate paperwork with OP&F.

Refund of Employee Contributions

Upon separation from service, a member can receive the contributions that he or she made to the plan or the employee share of member contributions picked-up on the member's behalf by their employer. Employer contributions are not refundable.

Termination before Retirement with 25 Years of Service Credit

Benefit

Same as the Normal Service Retirement benefit, except benefit commences once the member reaches minimum retirement age.

- For members hired into an OP&F-covered position after July 1, 2013, minimum retirement age is 52.
- For members hired into an OP&F-covered position on or before July 1, 2013, minimum retirement age is 48.

Termination before Retirement with 15 Years of Service Credit

Benefit

Same as the Service Commuted Retirement, except benefit commences once the member reaches minimum retirement age and 25 years have elapsed from the date of full-time hire.

- For members hired into an OP&F-covered position after July 1, 2013, the minimum retirement age is 52.
- For members hired into an OP&F-covered position on or before July 1, 2013, the minimum retirement age is 48.



Termination Before Retirement With Less Than 15 Years of Service Credit

Benefit

A lump sum amount equal to the sum of the member's contributions to OP&F.

Deferred Retirement Option Plan

Eligibility

When a member is eligible for a normal service retirement they can enter DROP by delaying retirement and continuing to work as a full-time police officer or firefighter.

- For members hired into an OP&F-covered position after July 1, 2013, normal service retirement eligibility is age 52 with at least 25 years of service credit.
- For members hired into an OP&F-covered position on or before July 1, 2013, normal service retirement eligibility is age 48 with at least 25 years of service credit.

Benefit

DROP is a cost neutral benefit offered by OP&F. Upon the DROP effective date, the member's pension is calculated as if that were their date of retirement. While the member continues to work and draw their normal salary, the amount they would have received in retirement benefits accumulates tax-deferred at OP&F on their behalf, as well as a portion of their OP&F employee contributions and interest. Since the member's pension has already been calculated:

- The years of DROP service do not apply towards the member's normal service retirement.
- If a member earns a higher salary after their DROP effective date due to a raise, job promotion, etc., it will not be used to recalculate their pension and, therefore, will not result in that member receiving a higher pension upon retirement.

The DROP interest rate is set by administrative rule and is subject to change at any time. OP&F credits interest to all DROP balances each month at a rate equal to the 10-year United States (U.S.) Treasury Note Business Day Series, as published by the U.S. Department of the Treasury, with a cap of five percent and a floor of two and a half percent. This variable interest rate is compounded annually and adjusted quarterly to match the published 10-year U.S. Treasury Note rate for the last trading business day of the preceding quarter and is in effect for the subsequent quarter.

Members whose election to participate in DROP is effective after July 1, 2013 do not qualify for annual cost-of-living allowances (COLA) at any time during DROP. Members whose election to participate in DROP is effective on or before July 1, 2013 will continue to receive a cost-of-living allowance during DROP, but only when they reach 55 years of age and have been participating in



APPENDIX A – SUMMARY OF MAIN BENEFIT PROVISIONS

DROP for at least one year. Those members whose enrollment date into DROP qualify them for a cost-of-living allowance during DROP will receive three percent of their base pension.

Member contributions are credited to their DROP account based on the number of years of DROP service. For those members whose election to participate in DROP is effective after July 1, 2013, OP&F applies contributions to DROP in the following manner:

Years of DROP Service	Percentage of Member Contributions
Years 1-3	50% of member's contributions
Years 4-5	75% of member's contributions
Years 6-8	100% of member's contributions

For this group of members, the minimum participation in DROP, without penalty, is five years and the maximum is eight.

- If a member terminates employment within the first five years of electing to participate in DROP, then the member forfeits all of their DROP interest. In addition to losing their accumulated interest, members who choose to terminate employment before completing their required participation period cannot withdraw any of the funds in their DROP account until the minimum participation period has expired. The only exception to this rule is if the member dies during the minimum participation period. The member's surviving spouse, designated beneficiary or estate, as applicable will receive the entire DROP account balance determined at the time of death.
- If a member chooses to continue working after eight years in DROP, the member forfeits all DROP benefits and receives the Normal Service Retirement benefit upon retirement, which will be calculated to include the service credit earned during the DROP participation period.



APPENDIX A – SUMMARY OF MAIN BENEFIT PROVISIONS

For those members whose election to participate in DROP was on or before July 1, 2013, member contributions are applied to DROP under the following schedule:

Years of DROP Service	Percentage of Member Contributions
Years 1-2	50% of member's contributions
Year 3	75% of member's contributions
Years 4-8	100% of member's contributions

For this group of members, the minimum participation in DROP, without penalty, is three years and the maximum is eight.

- If a member terminates employment within the first three years of electing to participate in DROP, then the member forfeits all of their DROP interest. In addition to losing their accumulated interest, members who choose to terminate employment before completing their required participation period cannot withdraw any of the funds in their DROP account until the minimum participation period has expired. The only exception to this rule is if the member dies during the minimum participation period. The member's surviving spouse, designated beneficiary or estate, as applicable will receive the entire DROP account balance determined at the time of death.
- If a member chooses to continue working after eight years in DROP, the member forfeits all DROP benefits and receives the Normal Service Retirement benefit upon retirement, which will be calculated to include the service credit earned during the DROP participation period.

All DROP members retiring before the eight-year max receive their Normal Service Retirement benefit determined at the time of DROP entry, with the COLA adjustment (if applicable) to their date of retirement when eligible. These members will also receive the DROP account balance as a lump sum or monthly distribution.

If a member dies while participating in DROP, the member's surviving spouse, designated beneficiary or estate will receive the entire DROP account balance determined at the time of death. Also, the member's surviving spouse or contingent dependent beneficiary will receive either the retirement allowance elected by the member at the time of DROP entry or a 50 percent joint and survivor annuity, whichever is greater. All other statutory death benefits will apply.

If the member becomes disabled while in DROP, and has not terminated employment, the member must choose either to receive a disability benefit or a service retirement with DROP. If the member chooses the disability benefit, the member forfeits all DROP benefits and receives the disability benefit, with service credit during the DROP period included.



Disability Benefits

Members who become unable to perform their official duties and whose earning capacities are impaired may qualify for disability benefits. Disability benefits are classified as either service-incurred (on-duty) or non-service-incurred (off-duty) and differ in eligibility requirements and benefit formulas. Annual medical evaluations are required for disability benefit recipients who would not have met the age and service requirements for a Normal Service Retirement, unless the Board of Trustee waives this requirement based upon an OP&F physician's certification that the disability is ongoing and further evaluation would not be cost effective. Annual earnings statements are also required to be submitted to OP&F.

Permanent and Total Disability (On-Duty)

Eligibility

No age or service requirement.

Benefit

An annual benefit equal to 72 percent of the allowable average annual salary.

Partial Disability (On-Duty)

Eligibility

No age or service requirement.

Benefit

If the member has less than 25 years of service credit an annual benefit fixed by the Board of Trustees to be a certain percent up to 60 percent of the allowable average annual salary. If the member has 25 or more years of service credit, the annual disability benefit is equal to the Normal Service Retirement amount.

Non-Service Incurred Disability (off-Duty)

Eligibility

Any age and at least five years of service credit.



APPENDIX A – SUMMARY OF MAIN BENEFIT PROVISIONS

Benefit

An annual amount is the percent awarded by the Board of Trustees and may not exceed 60 percent of the allowable average annual salary. Service over 25 years cannot be used in calculating an off-duty disability award.

Pre-Retirement Survivor Annuity

Eligibility

Upon death before retirement, but after having satisfied the requirements for a Normal Service Retirement or an Age/Service Commuted retirement.

Benefit

The surviving spouse or contingent dependent beneficiary will receive the equivalent of a 50 percent joint and survivor annuity, calculated under the assumption that the decedent had retired effective the day following his/her death.

Statutory Survivor Benefits

Eligibility

Upon death of any active or retired member of OP&F.

Benefit

- **Surviving Spouse's Benefit**

An annual amount equal to \$6,600 (\$550 monthly), plus an annual COLA of three percent of the original base benefit, paid each July 1, beginning July 1, 2000. The benefit is paid to the surviving spouse for life.

- **Surviving Child's Benefit**

An annual amount equal to \$1,800 (\$150 monthly), payable until such child attains age 22 or marries, whichever occurs first. A dependent disabled child, regardless of age at time of member's death, is entitled to a benefit until death or recovery from disability. A COLA of three percent of the original base is payable each July 1.

- **Dependent Parents' Benefit**

If there is no surviving spouse or dependent children, an annual amount of \$2,400 (\$200 monthly) is payable to one dependent parent or \$1,200 (\$100 monthly) each to two dependent parents for life or until dependency ceases or remarriage. A COLA of three percent of the original base is payable each July 1.



APPENDIX A – SUMMARY OF MAIN BENEFIT PROVISIONS

Survivor	Monthly Benefit	Causes of Termination
Widow/Widower	current amount + future COLA	*Death
Child	current amount + future COLA	*Death *Marriage *Attainment of age 22
Dependent disabled child	current amount + future COLA	*Death *Recovery from disability
One dependent parent	current amount + future COLA	*Death *Re-marriage
Two dependent parents	1/2 current amount (each) + future COLA	*Termination of dependency

Benefit Type	Base Monthly Benefit Amount	Base Monthly Benefit Amount Plus Increases Through July 1, 2022	Monthly Increases Effective July 1, 2023
Spouse	\$550	\$925.10 *	\$16.50
Child	150	252.30 **	4.50
One Parent	200	336.40 ***	6.00
Two Parents	100	168.20	3.00

- * On July 1, 2000 the Statutory Surviving Spouse Benefit increased by \$12.10 per month. This increase was a percentage of the original benefit amount, equaling the percentage increase in the CPI plus unused prior increases, to a maximum of three percent. Every year after 2000, the monthly increase was \$16.50 or three percent of the base benefit.
- ** On July 1, 2000 the Statutory Child Benefit increased by \$3.30 per month. This increase was a percentage of the original benefit amount, equaling the percentage increase in the CPI plus unused prior increases, to a maximum of three percent. Every year after 2000, the monthly increase was \$4.50 or three percent of base benefit.
- *** On July 1, 2000 the Statutory Surviving One Parent Benefit increased by \$4.40 per month. This increase was a percentage of the original benefit amount, equaling the percentage increase in the CPI plus unused prior increases, to a maximum of three percent. Every year after 2000, the monthly increase was \$6.00 or three percent of base benefit.



Lump Sum Death Benefit

Eligibility

Upon death of any retired or disabled member of OP&F.

Benefit

A lump sum payment of \$1,000 is paid to the member's surviving spouse or, if no surviving spouse, to a designated beneficiary. If there is no surviving spouse or beneficiary, then it is paid to the member's estate.

State of Ohio Public Safety Officers Death Benefit Fund (DBF)

Benefit

The Death Benefit Fund is funded by the State of Ohio and provides special benefits to eligible survivors of public safety officers who are killed in the line of duty or who die from injuries or disease incurred in the performance of official duties. These eligible survivors are entitled to receive the member's full monthly salary received by the public safety officer prior to his or her death in the line of duty, plus any increases in salary that would have been granted to the deceased public safety officer. The benefit is paid to the public safety officer's eligible survivors as a group until the public safety officer's maximum pension eligibility date. This is the date on which the deceased public safety officer would have become eligible for the maximum annual retirement allowance or pension that may be paid to a member from the member's retirement system (OP&F, OPERS, SHPRS or the Cincinnati Retirement System) had the member continued to accrue service credit from that system, which will be reduced at the member's maximum pension eligibility date. These death benefit payments are in addition to the statutory survivor benefit and any optional payment plan benefits elected by the member.



Annuities

Effective Feb. 28, 1980, for those members who are retiring on either a service pension or a disability benefit, optional annuity plans can be chosen, subject to certain limitations. The member can elect actuarially reduced benefits under a joint and survivor annuity, life annuity certain and continuous, or multiple beneficiary annuity plan. The optional annuity plans allow the member's beneficiary(ies) to receive a lifetime payment upon the member's death.

Annuity Types

Single Life Annuity

For unmarried members, this is the standard annuity plan. Married members may elect this plan only if the spouse consents to the selection in writing. This plan pays the maximum retirement allowance that the member is entitled to receive and, upon the member's death, none of the pension or benefit is continued to any beneficiary.

Joint and Survivor Annuity (JSA)

Under this plan, a member designates that, upon his or her death, a certain percentage of the member's actuarially reduced benefit is continued to a surviving designated beneficiary for life.

Any percentage between one percent and 100 percent of the member's reduced pension may be continued to the surviving designated beneficiary, but the percent continued may be limited based on the beneficiary's age. If a member is married at the time benefits are elected, the standard plan is a 50 percent JSA continuing one-half of the member's reduced monthly benefit to his or her surviving spouse. If the member wants to select a plan which provides for the continuation of benefits for someone other than the spouse or less than 50 percent JSA to the spouse, the spouse must consent in writing to this choice. This plan automatically terminates upon death of the beneficiary, to be effective the month following OP&F's receipt of notice of death. Also, this plan may be cancelled upon divorce or dissolution of marriage with the consent of the member's spouse or a specific court order, at which point the annuity reverts to the single life annuity to the member. An elected option may be cancelled within one year after benefits commence, with the consent of the beneficiary.



Multiple Beneficiary Annuity

Under the multiple beneficiary annuity plan, a member may designate up to four beneficiaries at the time of retirement so that, upon death, a certain percentage of the member's actuarially reduced benefit is continued to the surviving beneficiaries for their lives. If the member is married at the time of retirement, the spouse must consent in writing for an annuity selection that provides for less than 50 percent JSA payable to the spouse.

Life Annuity Certain and Continuous (LACC)

This plan provides a lifetime allowance to the member and will only be paid to a designated beneficiary if the member dies and the period elected by the member has not expired. The minimum guarantee period is five years and the maximum is 20 years. 100 percent of the member's reduced pension continues to the beneficiary for the guarantee period selected. An elected option may be cancelled within one-year after benefits commence, with the consent of the beneficiary. If the member is married at the time of retirement, the spouse must consent in writing for an annuity selection that provides for less than a 50 percent JSA payable to the spouse.

Tiered Retirement Plan – COLA or Terminal Pay (Non-COLA)

Members retiring on or after July 24, 1986, who had 15 or more years of service credit as of January 1, 1989, are eligible to select between two different pension calculation plans. Under the terminal pay method, a member's monthly pension benefit is calculated using terminal payouts at the time of retirement such as accrued sick leave and vacation compensation to increase the amount of the average annual salary, but subject to certain limitations, and these members are not eligible to receive cost-of-living allowance adjustments. Under the COLA method, terminal payments are not included in the calculation of a member's average annual salary, but the member is eligible to receive COLA increases. The COLA method is the automatic calculation method for any active member with fewer than 15 years of service as of January 1, 1989.

Under the COLA method, members who are at least 55 years old and have been receiving OP&F pension benefits for at least one year are eligible for cost-of-living allowance adjustments. The age 55 provision for receiving a COLA does not apply to those who are receiving a permanent and total disability benefit, surviving beneficiaries under optional plans and statutory survivors.

The COLA amount for members who have 15 or more years of service credit as of July 1, 2013 and members who are receiving a pension benefit that became effective before July 1, 2013 will be equal to three percent of the member's base pension benefit.

The COLA amount for members who have less than 15 years of service credit as of July 1, 2013, and members whose pension benefit became effective on or after July 1, 2013, will be equal to a percentage of the member's base pension benefit where the percentage is the lesser of three percent or the percentage



APPENDIX A – SUMMARY OF MAIN BENEFIT PROVISIONS

increase in the consumer price index, if any, over the twelve-month period that ends on the thirtieth day of September of the immediately preceding year, rounded to the nearest one-tenth of one percent.

Members who retired prior to July 24, 1986 or their surviving beneficiaries under optional plans are entitled to cost-of-living allowance increases. The annual increase is paid on July 1st of each year. The annual COLA increase is \$360 under a Single Life Annuity Plan with proportional reductions for optional payment plans.

Re-employed Retiree’s Defined Contribution Plan Benefit

Effective June 30, 1991, every person who is retired under an Ohio public pension plan and who is re-employed in an OP&F covered position must contribute to OP&F at the same rate as other police officers or firefighters. The employer pays the normal rate as well. If the re-employed member terminates employment before age 60, Ohio law allows the member to receive a lump sum payment of post-retirement employee contributions made during the period of re-employment, plus interest. If the member waits until age 60 to receive this benefit, he or she can choose to receive either a lump sum payment in an amount equal to twice his or her contributions, plus interest, or a lifetime annuity paid monthly. If, after calculation, the member’s lifetime monthly annuity is less than \$25, the member may only select the lump sum payment option. If the member is married spousal consent is required before payment can occur.

Health Care Stipend and Medicare

Although support for retiree health care is not a vested right and is a discretionary benefit from OP&F subject to change at any time, the Board of Trustees has elected to continue to sponsor a plan for the last 45 years.

Beginning in 1974, OP&F sponsored a group health care program for retirees and their dependents by covering all or part of the plan premiums, in addition to paying all claims.

Effective July 1992, retirees and survivors made monthly medical benefit contributions which are credited to the Health Care Stabilization Fund. These contributions were reviewed on an annual basis to determine adequacy with the rising cost of health care. In 2004, a new contribution strategy was implemented. Retirees and survivors then paid a percentage of the full cost of the benefit based on the year of retirement. Due to the rising cost of health care and the primary source requirements of pension reform legislation enacted in 2013, OP&F is no longer able to offer a plan as in the past. On December 31, 2018, the group health care plan ended.

On January 1, 2019, a stipend-based health care model replaced the self-insured group health care plan. OP&F contracted with a vendor who assists eligible retirees in choosing health care plans that are available where they live (both Medicare eligible and pre-65 populations). A stipend funded by OP&F is available to these members through a Health Reimbursement Arrangement and can be used to



APPENDIX A – SUMMARY OF MAIN BENEFIT PROVISIONS

reimburse retirees for qualified health care expenses. As a result of this change, it is expected that the solvency of the HCSF will be extended allowing OP&F to provide stipends to eligible participants.

Regardless of a benefit recipient's participation in the health care program, OP&F is required by law to pay eligible recipients of a service pension, disability benefit and spousal survivor benefit for their Medicare Part B insurance premium, up to the statutory maximum provided the benefit recipient is not eligible to receive reimbursement from any other source. Once OP&F receives the necessary documentation, a monthly reimbursement is included as part of the recipient's next benefit payment.

Note: This benefit is not included in the principal valuation results, but it is included in the results of the retiree health care valuation.



APPENDIX B – STATEMENT OF ACTUARIAL ASSUMPTIONS AND OTHER INPUTS

APPENDIX B

STATEMENT OF ACTUARIAL ASSUMPTIONS AND OTHER INPUTS

The actuarial assumptions were adopted as of January 1, 2022, based on a quinquennial experience review covering the period 2017 through 2021. The next review of the actuarial assumptions is to be completed for adoption with the January 1, 2027 valuation.

Interest Rate

7.50 percent per annum, compounded annually.

Salary Increase Rates

Assumed annual salary increases are as follows:

Years of Service	Salary Increase Rate
Less than 1	10.50%
1	9.00%
2	8.00%
3	6.00%
4	4.50%
5 or more	3.75%

Payroll Growth

3.25 percent per annum, compounded annually, consisting of inflation rate of 2.75 percent plus productivity increase rate of 0.5 percent.

DROP Interest Crediting Rate

3.75 percent per annum, compounded annually.

CPI-Based COLA

2.2 percent simple for increases based on the lesser of the increase in CPI and three percent.



APPENDIX B – STATEMENT OF ACTUARIAL ASSUMPTIONS AND OTHER INPUTS

Withdrawal Rates

The following sample withdrawal rates are based on age and service (for causes other than death, disability, or retirement):

Years of Service	Firefighters	Police
0	5.00%	14.00%
5	1.00%	2.00%
10	0.75%	1.50%
15	0.50%	1.00%
20	0.20%	0.65%
24	0.20%	0.25%

Rates of Disability

The following are sample rates of disability and occurrence of disability by type:

Age	Firefighters	Police
20	0.0004%	0.0005%
25	0.0020%	0.0032%
30	0.0088%	0.0401%
35	0.0364%	0.0693%
40	0.0816%	0.1814%
45	0.1388%	0.2399%
50	0.5348%	0.6080%
55	0.8100%	0.5036%
60	1.2240%	0.9351%
64	2.8760%	1.3946%

Type of Disability	
On duty permanent and total	17%
On duty partial	58%
Off duty ordinary	25%



APPENDIX B – STATEMENT OF ACTUARIAL ASSUMPTIONS AND OTHER INPUTS

Retirement Rates

The following rates apply to members who are not currently in DROP, but either have reached DROP eligibility or may become eligible for DROP in the future. Upon first eligibility for retirement, the rate is 15 percent for Firefighters and 20 percent for Police. After first eligibility the rates are as follows:

Years of Service	Firefighters	Police
25	15%	20%
26	5%	8%
27	5%	8%
28	5%	8%
29	5%	8%
30	5%	8%
31	5%	15%
32	5%	15%
33	5%	15%
34	5%	15%
35+	100%	100%

The following rates apply to members who will not reach retirement eligibility prior to age 62:

Firefighters

Age	Years of Service	
	15-23	24
62	25%	15%
63	25%	15%
64	25%	15%
65	100%	100%

Police

Age	Years of Service	
	15-23	24
62	25%	20%
63	25%	20%
64	25%	20%
65	100%	100%



APPENDIX B – STATEMENT OF ACTUARIAL ASSUMPTIONS AND OTHER INPUTS

Deferred Retirement Option Plan Elections

80 percent of members who do not retire when first eligible are assumed to elect DROP.

DROP Retirement Rates

The following rates of retirement apply to members in DROP as of the valuation date:

Years of Service	Firefighters	Police
25	4.75%	7.25%
26	4.75%	6.00%
27	4.75%	6.25%
28	6.00%	6.00%
29	9.00%	8.50%
30	15.75%	16.75%
31	11.00%	16.25%
32	44.00%	50.00%
33+	100.00%	100.00%

Retirement Age for Inactive Vested Participants

Commencement at age 48 and 25 years of service from full-time hire date, whichever is later.



Service Retiree and Vested Former Member Mortality

Mortality for service retirees is based on the Pub-2010 Below-Median Safety Amount-Weighted Healthy Retiree mortality table with rates adjusted by 96.2% for males and 98.7% for females. All rates are projected using the MP-2021 Improvement Scale.

Disabled Mortality

Mortality for disabled retirees is based on the Pub-2010 Safety Amount-Weighted Disabled Retiree mortality table with rates adjusted by 135% for males and 97.9% for females. All rates are projected using the MP-2021 Improvement Scale.

Contingent Annuitant Mortality

Mortality for contingent annuitants is based on the Pub-2010 Below-Median Safety Amount-Weighted Contingent Annuitant Retiree mortality table with rates adjusted by 108.9% for males and 131% for females. All rates are projected using the MP-2021 Improvement Scale.

Pre-Retirement Mortality

Mortality for active members is based on the Pub-2010 Below-Median Safety Amount-Weighted Employee mortality table. All rates are projected using the MP-2021 Improvement Scale.

Credited Service

Credited service on the valuation date, as provided by OP&F, includes all service credited under the plan, including service transferred from other municipal plans and purchased service. The valuation assumes future service will be credited at the rate of one year per year worked, with no assumed future crediting of transferred service or purchased service.

415 Limits

Benefits are limited by the IRC Section 415, assumed to increase 2.75 percent per annum.



APPENDIX B – STATEMENT OF ACTUARIAL ASSUMPTIONS AND OTHER INPUTS

Future Expenses

The normal cost is increased by all administrative expenses budgeted, net of the State Subsidy received from the State of Ohio.

Unknown Data for Members

Same as those exhibited by members with similar known characteristics. Deferred benefits are estimated at termination until OP&F has determined the actual amount at retirement. Reported salaries that are less than \$10,000 when annualized are assumed to be anomalous and are reset to \$60,000. The adjustment for late reported salaries is not applied in this case.

Late Reported Salaries

A 1.090 percent load is added to the 2022 reported salaries to account for salaries accrued but not reported for the valuation. This adjustment is based on an average of plan experience from the prior three years. The raw adjustment rates for each year are as follows:

Pay for Calendar Year	Raw Adjustment
2022	1.032%
2021	1.418%
2020	0.820%

This adjustment will be reviewed annually for future late reported salaries.

Percent Married

80 percent of active members are assumed to be married.

Age of Spouse

Wives are assumed to be three years younger than their husbands.



Optional Form Election

40 percent of service retirees and 15 percent of disability retirees are assumed to elect a 45 percent Joint and Survivor pension at retirement. If the joint annuitant predeceases the retiree, the increase, or pop-up, in the retiree’s benefit associated with the 45 percent Joint and Survivor pension is assumed to be 14.36 percent for disability retirees and 10.50 percent for all other retirees.

DROP Account Distributions

For currently retired members who have an outstanding DROP balance we assume they will take their balance in installments over 10 years. For members who terminate DROP before the required three or five years, distribution of the account balance is assumed to be made in a lump sum payment at the end of the three- or five-year period. Distributions for active members are assumed to be made in a lump sum or installments at retirements in a pattern equivalent to 25 percent receiving lump sums, 30 percent receiving installments over two years, and 45 percent receiving installments over 10 years.

Dependent Parents

None anticipated, but dependency of any dependent parent in receipt of benefits is assumed to continue for the parent’s lifetime.

Dependent Children

Each member is assumed to have two children, born when the member was age 26. Dependency is assumed to cease when the child is 22.

Medicare Part B Premium Reimbursement

For service and disability retirements, as well as survivors, Ohio Police & Fire reimburses the standard Medicare Part B premium (\$107.00 per month for 2022) provided the retiree is not eligible for reimbursement from any other sources.

70 percent of members are assumed to be eligible for reimbursement once they reach age 65.

The Medicare Part B Premium assumptions are only used to determine the cost if the Medicare Part B reimbursement payments were to be paid from the pension trust instead of the Health Care Stabilization Fund.



APPENDIX B – STATEMENT OF ACTUARIAL ASSUMPTIONS AND OTHER INPUTS

Changes in actuarial assumptions since the January 1, 2022 valuation:

We have updated the profile of new active members to maintain the same Police and Firefighter headcounts in the future and to only reflect the impact of the state subsidy paid in the current valuation year. The impact was an increase in the funding period of 0.35 years and no impact on the current funded status.

The assumptions used for the January 1, 2023 actuarial valuation are based on the quinquennial experience review prepared as of December 31, 2021 and adopted by the Board of Trustees on October 26, 2022.



Methods

Actuarial Cost Method

Projected benefit method with individual level percentage entry age normal cost and actuarial accrued liability. Gains and losses are reflected in the actuarial accrued liability. Prior to January 1, 2015, to be consistent with the asset methodology employed by OP&F, DROP balances were netted out of the liabilities.

Adjustment for Re-Employed Retirees

The present value of future benefits and the actuarial accrued liability are increased by an amount for the re-employed retirees' defined contribution plan benefit equal to two times the re-employed retirees' post-retirement contribution balances on the valuation date.

Adjustment for Employer Accrued Liability

The actuarial accrued liability is reduced by the present value of special employer contributions -- referred to as "Local Funds." Local governments are required by state statute to pay the unfunded portion of the actuarially- determined liability of the local police and firefighter's relief and pension funds that were merged to form OP&F in 1967. The ORC designates this obligation of the local governments to the Employers' Accrued Liability. Interest on the outstanding balance is being accrued at the rate of 4.25 percent, compounded semiannually. Local governments began repayment in 1969 and payments are required to be made until 2035. The present value of the remaining payments on the valuation date is determined using the valuation interest rate.

Asset Valuation Method

A four-year moving average market value of assets that spreads the difference between the actual investment income and the expected income on the market value (based on the valuation interest rate) over a period of four years. The actuarial value shall not be less than 80 percent or more than 120 percent of market value.

Data

Census and Assets

The valuation was based on members of OP&F as of the valuation date and does not take into account future members. All census and asset data was supplied by OP&F. Salaries and benefits tabulated in the tables in this report were summed to pennies, but displayed to whole dollars, thus, totals may not be consistent with amounts displayed due to rounding.



EXHIBIT I – 1a

ACTIVE MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Salaries Distributed by Age
 POLICE

Age	Male		Female		Total	
	Number	Compensation	Number	Compensation	Number	Compensation
19	1	\$ 44,738	-	\$ -	1	\$ 44,738
20	10	538,929	1	60,145	11	599,074
21	57	3,410,238	6	336,619	63	3,746,857
22	108	6,222,845	26	1,614,830	134	7,837,676
23	194	11,714,165	42	2,697,320	236	14,411,485
24	260	16,644,948	42	2,665,781	302	19,310,729
25	272	18,154,708	82	5,512,163	354	23,666,871
26	358	25,472,015	64	4,192,650	422	29,664,665
27	362	25,686,408	75	5,096,180	437	30,782,587
28	409	30,181,869	70	5,066,962	479	35,248,831
29	425	31,773,112	70	5,278,987	495	37,052,099
30	412	32,355,629	89	6,843,718	501	39,199,348
31	443	34,842,653	81	6,501,645	524	41,344,297
32	455	36,634,446	76	6,003,072	531	42,637,518
33	411	34,754,771	86	6,340,194	497	41,094,965
34	438	37,198,263	54	3,943,113	492	41,141,375
35	422	36,593,040	45	3,447,966	467	40,041,006
36	403	35,004,603	47	3,619,262	450	38,623,864
37	429	37,363,899	39	3,253,753	468	40,617,652
38	420	38,058,874	43	3,725,921	463	41,784,795
39	381	34,899,945	39	3,569,048	420	38,468,994
40	376	33,837,011	39	3,795,345	415	37,632,356
41	334	32,411,762	41	3,735,593	375	36,147,355
42	367	34,442,080	44	4,111,963	411	38,554,043
43	330	31,925,947	39	3,760,191	369	35,686,137
44	310	30,751,636	33	3,434,964	343	34,186,600
45	367	36,811,451	20	2,018,059	387	38,829,511
46	336	32,677,700	34	3,164,049	370	35,841,749
47	380	37,672,219	32	3,134,962	412	40,807,181



APPENDIX C – DETAILED TABULATIONS OF THE DATA

EXHIBIT I – 1a

ACTIVE MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Salaries Distributed by Age
 POLICE (continued)

Age	Male		Female		Total	
	Number	Compensation	Number	Compensation	Number	Compensation
48	363	\$ 36,371,587	39	\$ 3,662,491	402	\$ 40,034,078
49	373	38,242,630	44	4,354,121	417	42,596,752
50	424	43,081,190	42	4,264,703	466	47,345,893
51	463	46,749,974	47	4,827,923	510	51,577,897
52	507	51,723,511	59	6,201,885	566	57,925,397
53	426	43,883,798	40	3,916,562	466	47,800,360
54	365	37,715,820	33	3,362,233	398	41,078,053
55	310	31,814,993	27	2,647,859	337	34,462,852
56	236	24,386,412	28	2,774,926	264	27,161,338
57	181	18,667,869	17	1,552,449	198	20,220,318
58	145	14,500,986	20	1,926,886	165	16,427,872
59	98	9,531,277	18	1,766,731	116	11,298,008
60	81	7,780,624	6	608,490	87	8,389,114
61	58	5,329,635	9	909,188	67	6,238,823
62	43	4,107,770	5	476,881	48	4,584,651
63	28	2,683,965	2	163,619	30	2,847,585
64	21	1,926,746	3	253,255	24	2,180,001
65	15	1,344,062	2	161,422	17	1,505,484
66	8	725,096	-	-	8	725,096
67	3	310,038	2	144,083	5	454,121
68	5	453,120	-	-	5	453,120
69	5	409,534	-	-	5	409,534
70	3	273,122	-	-	3	273,122
71	2	203,781	-	-	2	203,781
72	2	102,795	-	-	2	102,795
73	1	89,983	-	-	1	89,983
74	1	77,219	-	-	1	77,219
75	1	105,407	-	-	1	105,407
76	-	-	-	-	-	-
77	-	-	-	-	-	-
78	-	-	-	-	-	-
79	1	46,209	-	-	1	46,209
Total	13,639	\$ 1,220,719,058	1,802	\$ 150,900,161	15,441	\$ 1,371,619,218



EXHIBIT I – 1b

ACTIVE MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Salaries Distributed by Years of Service
 POLICE

Service	Male		Female		Total	
	Number	Compensation	Number	Compensation	Number	Compensation
0	983	\$ 58,486,025	210	\$ 12,404,014	1,193	\$ 70,890,039
1	847	52,279,910	182	12,142,266	1,029	64,422,176
2	523	36,385,119	118	8,432,241	641	44,817,360
3	689	51,217,948	130	9,496,792	819	60,714,740
4	674	53,229,932	150	11,631,673	824	64,861,606
5	570	47,239,273	62	5,179,618	632	52,418,891
6	528	44,657,950	85	7,322,302	613	51,980,252
7	524	46,702,886	71	6,084,399	595	52,787,285
8	490	43,685,938	40	3,245,991	530	46,931,930
9	472	41,811,825	35	2,982,649	507	44,794,474
10	410	37,436,434	35	3,096,982	445	40,533,416
11	337	31,407,382	23	2,187,850	360	33,595,232
12	259	25,892,901	15	1,424,821	274	27,317,722
13	181	16,684,484	14	1,276,574	195	17,961,057
14	324	30,256,628	27	2,657,819	351	32,914,447
15	445	43,033,576	56	5,653,402	501	48,686,978
16	346	35,190,323	45	4,363,222	391	39,553,545
17	265	25,940,553	31	3,073,988	296	29,014,541
18	285	28,860,609	35	3,518,702	320	32,379,311
19	256	25,950,617	28	2,677,412	284	28,628,029
20	330	33,526,559	37	3,563,394	367	37,089,953
21	347	34,829,411	48	4,940,511	395	39,769,922
22	351	35,816,047	27	2,817,752	378	38,633,799
23	383	39,310,339	44	4,433,253	427	43,743,592
24	442	45,037,816	38	3,820,400	480	48,858,215
25	367	38,353,489	39	4,140,099	406	42,493,589



EXHIBIT I – 1b

ACTIVE MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Salaries Distributed by Years of Service
 POLICE (continued)

Service	Male		Female		Total	
	Number	Compensation	Number	Compensation	Number	Compensation
26	330	\$ 35,981,070	29	\$ 3,229,979	359	\$ 39,211,049
27	375	40,478,831	38	3,709,087	413	44,187,918
28	318	34,884,080	25	2,701,308	343	37,585,388
29	265	28,497,849	32	3,202,285	297	31,700,134
30	213	22,265,959	19	1,981,503	232	24,247,462
31	170	18,369,299	12	1,212,764	182	19,582,062
32	181	19,303,674	16	1,752,845	197	21,056,519
33	69	7,791,836	4	350,855	73	8,142,691
34	48	5,493,511	2	191,408	50	5,684,919
35	15	1,528,295	-	-	15	1,528,295
36	11	1,056,366	-	-	11	1,056,366
37	7	768,104	-	-	7	768,104
38	3	348,717	-	-	3	348,717
39	-	-	-	-	-	-
40	1	252,875	-	-	1	252,875
41	1	47,172	-	-	1	47,172
42	-	-	-	-	-	-
43	-	-	-	-	-	-
44	-	-	-	-	-	-
45	3	314,244	-	-	3	314,244
46	-	-	-	-	-	-
47	-	-	-	-	-	-
48	-	-	-	-	-	-
49	-	-	-	-	-	-
50	1	113,200	-	-	1	113,200
Total	13,639	\$ 1,220,719,058	1,802	\$ 150,900,161	15,441	\$ 1,371,619,218



EXHIBIT I – 2a

ACTIVE MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Salaries Distributed by Age
 FIREFIGHTERS'

Age	Male		Female		Total	
	Number	Compensation	Number	Compensation	Number	Compensation
19 & Under	18	\$ 1,025,254	-	\$ -	18	\$ 1,025,254
20	59	3,376,688	7	413,454	66	3,790,142
21	103	6,062,512	6	321,713	109	6,384,225
22	147	8,943,311	13	784,082	160	9,727,393
23	219	14,158,612	10	671,173	229	14,829,785
24	218	14,572,522	16	985,376	234	15,557,898
25	236	16,127,629	23	1,524,156	259	17,651,785
26	288	20,344,221	20	1,308,211	308	21,652,432
27	331	24,182,383	24	1,485,832	355	25,668,215
28	346	25,759,228	23	1,745,301	369	27,504,529
29	356	28,069,150	24	1,703,070	380	29,772,220
30	403	31,606,817	23	1,558,681	426	33,165,498
31	388	30,854,356	38	2,717,262	426	33,571,618
32	439	35,209,144	36	2,518,428	475	37,727,571
33	416	34,511,347	22	1,707,224	438	36,218,570
34	393	33,284,256	25	2,058,209	418	35,342,465
35	449	38,932,382	22	1,704,518	471	40,636,900
36	445	39,030,852	20	1,693,114	465	40,723,967
37	473	42,419,128	18	1,416,309	491	43,835,437
38	422	37,921,158	19	1,551,182	441	39,472,341
39	396	37,056,950	15	1,263,031	411	38,319,981
40	422	38,902,645	15	1,197,469	437	40,100,115
41	389	36,976,817	8	743,464	397	37,720,281
42	383	36,456,070	15	1,474,718	398	37,930,787
43	410	39,758,320	12	1,168,337	422	40,926,656
44	394	39,585,615	14	1,387,001	408	40,972,616
45	352	35,219,594	11	1,098,770	363	36,318,364
46	368	37,742,556	10	940,558	378	38,683,115
47	386	40,113,401	16	1,464,640	402	41,578,041



APPENDIX C – DETAILED TABULATIONS OF THE DATA

EXHIBIT I – 2a

ACTIVE MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Salaries Distributed by Age
 FIREFIGHTERS' (continued)

Age	Male		Female		Total	
	Number	Compensation	Number	Compensation	Number	Compensation
48	376	\$ 39,828,850	5	\$ 539,206	381	\$ 40,368,057
49	355	36,761,323	12	1,232,659	367	37,993,982
50	404	42,464,754	10	1,024,770	414	43,489,525
51	406	42,626,837	10	933,358	416	43,560,195
52	429	45,351,747	5	550,359	434	45,902,106
53	410	44,589,143	12	1,203,645	422	45,792,788
54	349	37,130,180	8	941,291	357	38,071,471
55	292	31,238,298	3	354,882	295	31,593,180
56	255	27,018,679	5	604,557	260	27,623,236
57	246	25,833,364	4	349,353	250	26,182,717
58	196	20,384,834	2	185,877	198	20,570,712
59	158	16,295,262	4	349,623	162	16,644,884
60	114	11,726,491	3	269,270	117	11,995,761
61	94	9,614,944	1	97,002	95	9,711,946
62	62	6,683,730	2	205,850	64	6,889,580
63	39	3,713,201	3	233,043	42	3,946,244
64	30	3,196,020	1	97,452	31	3,293,472
65	11	1,113,774	1	111,156	12	1,224,930
66	4	460,874	-	-	4	460,874
67	5	496,369	-	-	5	496,369
68	5	523,482	-	-	5	523,482
69	1	63,889	-	-	1	63,889
70	-	-	-	-	-	-
71	1	76,661	-	-	1	76,661
72	-	-	-	-	-	-
73	1	91,174	-	-	1	91,174
74	1	107,728	-	-	1	107,728
75	-	-	-	-	-	-
76	-	-	-	-	-	-
77	-	-	-	-	-	-
78	1	77,004	-	-	1	77,004
Total	13,894	\$ 1,275,671,535	596	\$ 47,888,636	14,490	\$ 1,323,560,171



EXHIBIT I – 2b

**ACTIVE MEMBERSHIP DATA AS OF JANUARY 1, 2023
Number and Annual Salaries Distributed by Years of Service
FIREFIGHTERS'**

Service	Male		Female		Total	
	Number	Compensation	Number	Compensation	Number	Compensation
0	1,061	\$ 62,223,627	120	\$ 6,820,266	1,181	\$ 69,043,893
1	838	53,941,449	96	6,172,112	934	60,113,561
2	520	36,803,946	40	2,836,396	560	39,640,342
3	629	48,643,344	54	4,241,143	683	52,884,487
4	631	51,523,147	29	2,339,430	660	53,862,577
5	646	55,745,360	23	2,031,658	669	57,777,018
6	557	48,782,643	14	1,281,953	571	50,064,596
7	471	41,568,402	12	1,069,112	483	42,637,515
8	474	43,088,590	21	1,945,942	495	45,034,532
9	461	42,439,060	13	1,278,519	474	43,717,580
10	368	35,291,598	8	812,612	376	36,104,210
11	375	35,349,470	12	1,168,585	387	36,518,055
12	323	32,021,120	10	1,031,871	333	33,052,992
13	224	21,323,528	3	354,367	227	21,677,895
14	361	35,080,772	5	604,605	366	35,685,377
15	315	29,767,623	12	1,117,572	327	30,885,195
16	320	33,180,776	10	937,740	330	34,118,516
17	245	24,307,655	6	529,946	251	24,837,601
18	250	25,698,268	8	700,346	258	26,398,614
19	398	39,507,731	7	614,660	405	40,122,391
20	312	32,304,215	9	935,719	321	33,239,934
21	377	39,913,782	12	1,186,804	389	41,100,586
22	449	47,110,238	17	1,756,776	466	48,867,015
23	449	47,774,473	13	1,426,237	462	49,200,710
24	445	49,038,368	19	2,077,293	464	51,115,661
25	378	41,284,887	4	411,792	382	41,696,680



EXHIBIT I – 2b

ACTIVE MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Salaries Distributed by Years of Service
 FIREFIGHTERS’ (continued)

Service	Male		Female		Total	
	Number	Compensation	Number	Compensation	Number	Compensation
26	380	\$ 40,944,229	8	\$ 851,242	388	\$ 41,795,471
27	311	33,287,496	2	222,662	313	33,510,159
28	271	30,050,754	2	298,439	273	30,349,193
29	237	25,850,157	-	-	237	25,850,157
30	231	25,427,903	2	248,768	233	25,676,671
31	185	21,122,615	1	154,441	186	21,277,056
32	147	16,172,326	2	238,564	149	16,410,889
33	129	14,603,983	2	191,063	131	14,795,047
34	57	6,636,831	-	-	57	6,636,831
35	30	3,653,560	-	-	30	3,653,560
36	20	2,177,165	-	-	20	2,177,165
37	10	1,190,907	-	-	10	1,190,907
38	1	136,612	-	-	1	136,612
39	4	356,321	-	-	4	356,321
40	2	170,174	-	-	2	170,174
41	2	176,425	-	-	2	176,425
42	-	-	-	-	-	-
43	-	-	-	-	-	-
44	-	-	-	-	-	-
45	-	-	-	-	-	-
46	-	-	-	-	-	-
47	-	-	-	-	-	-
48	-	-	-	-	-	-
49	-	-	-	-	-	-
50	-	-	-	-	-	-
Total	13,894	\$ 1,275,671,535	596	\$ 47,888,636	14,490	\$ 1,323,560,171



APPENDIX C – DETAILED TABULATIONS OF THE DATA

EXHIBIT I – 3a

ACTIVE MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Salaries Distributed by Age
 TOTAL

Age	Male		Female		Total	
	Number	Compensation	Number	Compensation	Number	Compensation
19 & Under	19	\$ 1,069,993	-	\$ -	19	\$ 1,069,993
20	69	3,915,617	8	473,599	77	4,389,216
21	160	9,472,750	12	658,332	172	10,131,082
22	255	15,166,156	39	2,398,913	294	17,565,069
23	413	25,872,777	52	3,368,493	465	29,241,270
24	478	31,217,470	58	3,651,157	536	34,868,626
25	508	34,282,336	105	7,036,319	613	41,318,655
26	646	45,816,236	84	5,500,861	730	51,317,097
27	693	49,868,790	99	6,582,012	792	56,450,802
28	755	55,941,097	93	6,812,264	848	62,753,361
29	781	59,842,262	94	6,982,057	875	66,824,319
30	815	63,962,446	112	8,402,400	927	72,364,845
31	831	65,697,008	119	9,218,907	950	74,915,915
32	894	71,843,590	112	8,521,499	1,006	80,365,089
33	827	69,266,117	108	8,047,418	935	77,313,535
34	831	70,482,518	79	6,001,322	910	76,483,840
35	871	75,525,423	67	5,152,483	938	80,677,906
36	848	74,035,455	67	5,312,376	915	79,347,831
37	902	79,783,027	57	4,670,062	959	84,453,090
38	842	75,980,033	62	5,277,103	904	81,257,136
39	777	71,956,895	54	4,832,079	831	76,788,975
40	798	72,739,656	54	4,992,814	852	77,732,470
41	723	69,388,579	49	4,479,057	772	73,867,636
42	750	70,898,150	59	5,586,681	809	76,484,831
43	740	71,684,266	51	4,928,528	791	76,612,794
44	704	70,337,251	47	4,821,965	751	75,159,216
45	719	72,031,046	31	3,116,829	750	75,147,874
46	704	70,420,257	44	4,104,607	748	74,524,864
47	766	77,785,621	48	4,599,602	814	82,385,223



APPENDIX C – DETAILED TABULATIONS OF THE DATA

EXHIBIT I – 3a

ACTIVE MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Salaries Distributed by Age
 TOTAL (continued)

Age	Male		Female		Total	
	Number	Compensation	Number	Compensation	Number	Compensation
48	739	\$ 76,200,438	44	\$ 4,201,697	783	\$ 80,402,134
49	728	75,003,954	56	5,586,780	784	80,590,734
50	828	85,545,944	52	5,289,474	880	90,835,418
51	869	89,376,811	57	5,761,281	926	95,138,092
52	936	97,075,259	64	6,752,244	1,000	103,827,503
53	836	88,472,941	52	5,120,207	888	93,593,148
54	714	74,846,000	41	4,303,525	755	79,149,525
55	602	63,053,291	30	3,002,741	632	66,056,032
56	491	51,405,091	33	3,379,483	524	54,784,574
57	427	44,501,233	21	1,901,802	448	46,403,035
58	341	34,885,820	22	2,112,763	363	36,998,583
59	256	25,826,539	22	2,116,353	278	27,942,892
60	195	19,507,115	9	877,760	204	20,384,875
61	152	14,944,579	10	1,006,190	162	15,950,769
62	105	10,791,501	7	682,730	112	11,474,231
63	67	6,397,167	5	396,662	72	6,793,829
64	51	5,122,766	4	350,707	55	5,473,473
65	26	2,457,836	3	272,578	29	2,730,414
66	12	1,185,969	-	-	12	1,185,969
67	8	806,408	2	144,083	10	950,490
68	10	976,602	-	-	10	976,602
69	6	473,424	-	-	6	473,424
70	3	273,122	-	-	3	273,122
71	3	280,442	-	-	3	280,442
72	2	102,795	-	-	2	102,795
73	2	181,157	-	-	2	181,157
74	2	184,947	-	-	2	184,947
75	1	105,407	-	-	1	105,407
76	-	-	-	-	-	-
77	-	-	-	-	-	-
78	1	77,004	-	-	1	77,004
79	1	46,209	-	-	1	46,209
Total	27,533	\$ 2,496,390,593	2,398	\$ 198,788,797	29,931	\$ 2,695,179,389



EXHIBIT I – 3b

ACTIVE MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Salaries Distributed by Years of Service
 TOTAL

Service	Male		Female		Total	
	Number	Compensation	Number	Compensation	Number	Compensation
0	2,044	\$ 120,709,652	330	\$ 19,224,280	2,374	\$ 139,933,933
1	1,685	106,221,360	278	18,314,377	1,963	124,535,737
2	1,043	73,189,065	158	11,268,637	1,201	84,457,702
3	1,318	99,861,293	184	13,737,934	1,502	113,599,227
4	1,305	104,753,079	179	13,971,103	1,484	118,724,183
5	1,216	102,984,633	85	7,211,275	1,301	110,195,909
6	1,085	93,440,593	99	8,604,256	1,184	102,044,848
7	995	88,271,288	83	7,153,512	1,078	95,424,800
8	964	86,774,529	61	5,191,933	1,025	91,966,462
9	933	84,250,885	48	4,261,168	981	88,512,053
10	778	72,728,032	43	3,909,594	821	76,637,626
11	712	66,756,852	35	3,356,435	747	70,113,287
12	582	57,914,022	25	2,456,693	607	60,370,714
13	405	38,008,011	17	1,630,941	422	39,638,952
14	685	65,337,400	32	3,262,425	717	68,599,825
15	760	72,801,199	68	6,770,974	828	79,572,173
16	666	68,371,099	55	5,300,962	721	73,672,061
17	510	50,248,207	37	3,603,934	547	53,852,142
18	535	54,558,877	43	4,219,048	578	58,777,925
19	654	65,458,349	35	3,292,071	689	68,750,420
20	642	65,830,774	46	4,499,113	688	70,329,887
21	724	74,743,193	60	6,127,315	784	80,870,509
22	800	82,926,286	44	4,574,528	844	87,500,814
23	832	87,084,812	57	5,859,490	889	92,944,302
24	887	94,076,183	57	5,897,693	944	99,973,876
25	745	79,638,377	43	4,551,892	788	84,190,269



EXHIBIT I – 3b

ACTIVE MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Salaries Distributed by Years of Service
 TOTAL (continued)

Service	Male		Female		Total	
	Number	Compensation	Number	Compensation	Number	Compensation
26	710	\$ 76,925,299	37	\$ 4,081,221	747	\$ 81,006,521
27	686	73,766,327	40	3,931,750	726	77,698,077
28	589	64,934,834	27	2,999,747	616	67,934,581
29	502	54,348,006	32	3,202,285	534	57,550,291
30	444	47,693,861	21	2,230,271	465	49,924,132
31	355	39,491,914	13	1,367,204	368	40,859,118
32	328	35,476,000	18	1,991,408	346	37,467,408
33	198	22,395,820	6	541,918	204	22,937,738
34	105	12,130,341	2	191,408	107	12,321,750
35	45	5,181,855	-	-	45	5,181,855
36	31	3,233,531	-	-	31	3,233,531
37	17	1,959,011	-	-	17	1,959,011
38	4	485,330	-	-	4	485,330
39	4	356,321	-	-	4	356,321
40	3	423,049	-	-	3	423,049
41	3	223,598	-	-	3	223,598
42	-	-	-	-	-	-
43	-	-	-	-	-	-
44	-	-	-	-	-	-
45	3	314,244	-	-	3	314,244
46	-	-	-	-	-	-
47	-	-	-	-	-	-
48	-	-	-	-	-	-
49	-	-	-	-	-	-
50	1	113,200	-	-	1	113,200
Total	27,533	\$ 2,496,390,593	2,398	\$ 198,788,797	29,931	\$ 2,695,179,389



EXHIBIT II - 1a

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Retirement Allowances Distributed by Age
 POLICE SERVICE RETIREES

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
48	25	\$ 1,327,281	-	\$ -	25	\$ 1,327,281
49	42	2,117,214	7	408,697	49	2,525,911
50	76	3,800,305	6	331,501	82	4,131,806
51	116	5,706,095	7	369,171	123	6,075,266
52	128	6,321,590	15	828,858	143	7,150,448
53	147	7,209,580	18	947,669	165	8,157,249
54	193	9,216,354	21	1,041,020	214	10,257,374
55	187	9,505,350	30	1,517,882	217	11,023,232
56	265	13,248,481	31	1,595,291	296	14,843,772
57	315	16,352,729	30	1,491,401	345	17,844,130
58	330	16,974,023	34	1,738,873	364	18,712,896
59	301	15,767,427	31	1,485,163	332	17,252,590
60	309	17,014,503	27	1,373,020	336	18,387,523
61	306	16,322,274	39	2,182,418	345	18,504,692
62	264	15,006,476	27	1,475,222	291	16,481,698
63	294	16,996,866	26	1,534,681	320	18,531,547
64	285	16,449,465	40	2,277,236	325	18,726,701
65	313	18,006,016	38	1,936,572	351	19,942,588
66	353	20,179,435	39	2,146,885	392	22,326,320
67	361	20,956,517	30	1,795,271	391	22,751,788
68	362	21,119,629	35	1,971,900	397	23,091,529
69	312	18,146,180	25	1,422,779	337	19,568,959
70	318	18,346,539	26	1,509,097	344	19,855,636
71	320	18,482,659	21	1,225,939	341	19,708,598
72	318	17,943,344	16	895,947	334	18,839,291
73	308	17,567,012	17	910,485	325	18,477,497
74	334	19,537,551	12	685,876	346	20,223,426



EXHIBIT II - 1a

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Retirement Allowances Distributed by Age
 POLICE SERVICE RETIREES (continued)

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
75	362	\$ 20,994,922	14	\$ 855,692	376	\$ 21,850,615
76	299	16,300,567	4	229,119	303	16,529,685
77	218	11,692,000	10	529,666	228	12,221,667
78	207	11,143,309	7	407,645	214	11,550,954
79	205	10,598,937	2	74,020	207	10,672,957
80	190	9,407,667	3	131,584	193	9,539,251
81	189	9,150,283	3	161,117	192	9,311,400
82	129	5,792,172	3	117,897	132	5,910,069
83	111	4,948,866	-	-	111	4,948,866
84	101	4,316,750	-	-	101	4,316,750
85	79	3,425,221	-	-	79	3,425,221
86	56	2,464,462	2	68,643	58	2,533,104
87	58	2,311,675	-	-	58	2,311,675
88	46	1,770,191	-	-	46	1,770,191
89	41	1,526,818	2	42,063	43	1,568,881
90	27	904,751	2	54,505	29	959,256
91	23	717,707	-	-	23	717,707
92	12	433,851	-	-	12	433,851
93	12	390,066	-	-	12	390,066
94	14	1,695,910	-	-	14	1,695,910
95	4	123,597	-	-	4	123,597
96	7	188,440	-	-	7	188,440
97	4	125,462	-	-	4	125,462
98	3	74,188	-	-	3	74,188
99	3	70,937	-	-	3	70,937
Total	9,282	\$ 500,189,644	700	\$ 37,770,802	9,982	\$ 537,960,446



EXHIBIT II – 1b

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Retirement Allowances Distributed by Age
 POLICE DISABILITY RETIREES

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
32 & Under	3	\$ 115,171	-	\$ -	3	\$ 115,171
33	-	-	-	-	-	-
34	-	-	-	-	-	-
35	2	46,824	-	-	2	46,824
36	1	16,701	-	-	1	16,701
37	3	113,202	-	-	3	113,202
38	4	141,146	-	-	4	141,146
39	3	89,290	3	88,650	6	177,940
40	5	191,856	3	101,134	8	292,990
41	6	277,499	2	57,431	8	334,930
42	10	353,925	2	38,272	12	392,197
43	13	374,470	3	60,554	16	435,024
44	15	517,034	2	65,294	17	582,328
45	19	764,205	4	163,589	23	927,794
46	18	625,825	5	202,815	23	828,640
47	29	1,131,604	12	457,017	41	1,588,621
48	33	1,228,302	5	181,975	38	1,410,276
49	32	1,250,511	13	462,394	45	1,712,905
50	48	1,897,496	12	382,759	60	2,280,254
51	57	2,394,109	12	480,908	69	2,875,018
52	65	2,765,441	20	819,557	85	3,584,998
53	61	2,395,533	17	669,308	78	3,064,841
54	80	3,516,562	20	786,523	100	4,303,085
55	92	4,011,208	12	426,967	104	4,438,175
56	79	3,399,398	16	629,433	95	4,028,831
57	81	3,816,547	21	873,786	102	4,690,332
58	84	3,702,101	25	990,153	109	4,692,255
59	64	2,929,933	19	893,950	83	3,823,884
60	58	2,812,673	18	759,259	76	3,571,931
61	75	3,470,265	15	630,820	90	4,101,085
62	70	3,455,216	10	496,125	80	3,951,342
63	64	3,174,955	11	501,677	75	3,676,632
64	77	3,772,493	18	893,233	95	4,665,726



EXHIBIT II – 1b

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Retirement Allowances Distributed by Age
 POLICE DISABILITY RETIREES (continued)

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
65	99	\$ 5,080,580	25	\$ 1,193,998	124	\$ 6,274,578
66	70	3,369,057	27	1,148,569	97	4,517,627
67	73	3,366,790	23	1,053,361	96	4,420,151
68	103	5,088,501	16	636,254	119	5,724,755
69	86	4,244,837	24	1,111,313	110	5,356,150
70	89	4,228,033	17	818,617	106	5,046,650
71	104	4,696,134	9	479,143	113	5,175,278
72	92	4,102,281	15	675,234	107	4,777,515
73	90	3,970,420	17	745,745	107	4,716,166
74	88	4,121,779	11	525,801	99	4,647,579
75	122	5,436,170	8	296,266	130	5,732,436
76	94	4,105,764	10	403,416	104	4,509,180
77	73	3,267,264	2	74,004	75	3,341,268
78	53	2,214,404	3	132,506	56	2,346,910
79	71	2,863,948	1	38,217	72	2,902,165
80	46	1,722,279	3	93,359	49	1,815,638
81	39	1,584,990	1	44,598	40	1,629,588
82	35	1,397,086	-	-	35	1,397,086
83	36	1,291,881	-	-	36	1,291,881
84	28	931,740	2	114,378	30	1,046,119
85	23	872,825	-	-	23	872,825
86	16	548,395	-	-	16	548,395
87	22	662,682	-	-	22	662,682
88	10	340,662	-	-	10	340,662
89	1	21,462	-	-	1	21,462
90	4	105,150	-	-	4	105,150
91	7	180,029	-	-	7	180,029
92	4	117,204	-	-	4	117,204
93	2	46,782	-	-	2	46,782
94	2	55,157	-	-	2	55,157
95	-	-	-	-	-	-
96	3	59,098	-	-	3	59,098
97	-	-	-	-	-	-
98	-	-	-	-	-	-
99	1	21,082	-	-	1	21,082
Total	2,837	\$ 124,865,962	514	\$ 21,698,361	3,351	\$ 146,564,322



EXHIBIT II – 1c

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Retirement Allowances Distributed by Age
 POLICE SURVIVORS AND BENEFICIARIES

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
15 & Under	46	\$ 139,162	36	\$ 123,108	82	\$ 262,270
16	13	39,359	12	36,331	25	75,690
17	13	39,359	10	30,276	23	69,635
18	11	33,304	10	30,276	21	63,580
19	15	45,414	10	30,276	25	75,690
20	11	52,453	14	42,386	25	94,840
21	15	93,576	8	24,221	23	117,797
22	2	5,947	1	3,028	3	8,975
23	-	-	1	2,812	1	2,812
24	4	26,165	1	8,467	5	34,632
25	2	25,196	1	14,328	3	39,524
26	5	13,626	1	2,596	6	16,222
27	-	-	2	5,407	2	5,407
28	1	2,664	-	-	1	2,664
29	3	8,125	-	-	3	8,125
30	1	2,866	-	-	1	2,866
31	1	3,028	2	22,202	3	25,230
32	4	10,598	2	22,202	6	32,801
33	3	7,571	3	17,156	6	24,727
34	1	2,326	-	-	1	2,326
35	-	-	2	14,129	2	14,129
36	4	77,378	3	33,304	7	110,681
37	-	-	5	35,659	5	35,659
38	3	7,873	5	83,097	8	90,971
39	-	-	1	11,101	1	11,101
40	1	3,028	3	33,304	4	36,331
41	1	14,941	3	33,304	4	48,244
42	3	35,846	4	28,258	7	64,104
43	2	6,055	4	44,405	6	50,460



EXHIBIT II – 1c

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
Number and Annual Retirement Allowances Distributed by Age
POLICE SURVIVORS AND BENEFICIARIES (continued)

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
44	-	\$ -	5	\$ 55,506	5	\$ 55,506
45	1	3,028	7	78,258	8	81,285
46	1	1,416	11	192,892	12	194,308
47	-	-	9	110,443	9	110,443
48	1	1,416	12	133,214	13	134,630
49	3	5,860	15	215,297	18	221,157
50	3	20,108	11	157,191	14	177,299
51	2	34,169	19	271,757	21	305,926
52	2	4,248	23	420,619	25	424,867
53	5	45,134	30	433,938	35	479,073
54	3	5,860	29	376,079	32	381,939
55	5	60,213	39	612,191	44	672,404
56	4	24,434	28	418,010	32	442,445
57	1	3,028	34	558,446	35	561,474
58	-	-	54	753,393	54	753,393
59	3	25,230	37	534,411	40	559,641
60	2	14,129	61	830,220	63	844,349
61	3	24,274	50	708,474	53	732,747
62	5	92,262	54	723,416	59	815,678
63	2	52,480	52	732,995	54	785,475
64	2	22,202	85	1,312,977	87	1,335,179
65	4	54,631	92	1,351,237	96	1,405,868
66	4	50,709	77	1,019,262	81	1,069,971
67	1	11,101	94	1,190,847	95	1,201,949
68	-	-	97	1,255,675	97	1,255,675
69	2	22,202	136	1,856,886	138	1,879,088
70	-	-	148	1,980,589	148	1,980,589
71	1	11,101	135	1,793,484	136	1,804,585
72	4	68,936	133	1,623,052	137	1,691,989



EXHIBIT II – 1c

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Retirement Allowances Distributed by Age
 POLICE SURVIVORS AND BENEFICIARIES (continued)

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
73	2	\$ 22,202	186	\$ 2,554,839	188	\$ 2,577,041
74	-	-	177	2,386,428	177	2,386,428
75	1	11,101	183	2,227,965	184	2,239,066
76	1	11,101	131	1,594,065	132	1,605,166
77	1	33,516	98	1,177,238	99	1,210,754
78	1	11,101	135	1,678,065	136	1,689,167
79	1	11,101	177	2,206,548	178	2,217,649
80	2	22,202	171	1,983,193	173	2,005,396
81	1	11,101	162	1,969,247	163	1,980,348
82	2	14,129	128	1,478,321	130	1,492,450
83	1	27,754	117	1,389,042	118	1,416,796
84	-	-	125	1,421,775	125	1,421,775
85	1	11,101	118	1,332,734	119	1,343,835
86	-	-	111	1,248,391	111	1,248,391
87	-	-	112	1,259,030	112	1,259,030
88	1	11,101	64	702,360	65	713,461
89	1	11,101	64	697,235	65	708,336
90	-	-	63	723,910	63	723,910
91	-	-	65	751,865	65	751,865
92	-	-	61	715,685	61	715,685
93	1	11,101	43	500,214	44	511,315
94	-	-	38	413,593	38	413,593
95	-	-	32	353,948	32	353,948
96	-	-	25	267,266	25	267,266
97	-	-	5	47,964	5	47,964
98	-	-	12	139,465	12	139,465
99	-	-	9	90,838	9	90,838
100	-	-	-	-	-	-
101	-	-	4	43,811	4	43,811
102	-	-	5	48,178	5	48,178
Total	246	\$ 1,573,744	4,342	\$ 53,835,607	4,588	\$ 55,409,352



EXHIBIT II – 2a

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Retirement Allowances Distributed by Age
 FIREFIGHTERS’ SERVICE RETIREES

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
46	-	\$ -	-	\$ -	-	\$ -
47	-	-	-	-	-	-
48	10	457,924	-	-	10	457,924
49	20	1,000,261	-	-	20	1,000,261
50	27	1,248,567	-	-	27	1,248,567
51	50	2,448,650	2	71,253	52	2,519,903
52	58	2,673,118	1	45,353	59	2,718,471
53	63	3,062,865	1	70,327	64	3,133,192
54	67	3,218,401	4	202,886	71	3,421,287
55	106	5,161,700	2	138,028	108	5,299,728
56	162	8,323,550	3	168,189	165	8,491,739
57	207	10,633,534	3	168,844	210	10,802,378
58	277	14,600,404	10	518,668	287	15,119,072
59	257	13,541,425	10	537,213	267	14,078,639
60	295	16,384,579	6	300,195	301	16,684,774
61	316	17,701,823	10	516,123	326	18,217,946
62	322	18,265,243	9	484,071	331	18,749,313
63	316	18,077,074	7	420,871	323	18,497,944
64	336	19,649,305	6	357,540	342	20,006,844
65	330	19,419,390	4	219,831	334	19,639,221
66	314	18,562,187	3	184,117	317	18,746,304
67	324	18,985,477	6	317,695	330	19,303,172
68	304	17,942,899	2	117,732	306	18,060,631
69	288	16,782,865	5	275,148	293	17,058,013
70	261	15,172,072	2	96,697	263	15,268,770
71	268	15,888,506	1	31,151	269	15,919,657
72	250	14,273,123	2	97,377	252	14,370,500
73	215	12,205,262	1	57,021	216	12,262,283



EXHIBIT II – 2a

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Retirement Allowances Distributed by Age
 FIREFIGHTERS’ SERVICE RETIREES (continued)

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
74	208	\$ 11,850,542	1	\$ 45,299	209	\$ 11,895,841
75	247	13,174,891	-	-	247	13,174,891
76	211	11,469,693	-	-	211	11,469,693
77	133	7,194,149	2	96,615	135	7,290,763
78	161	8,347,458	-	-	161	8,347,458
79	154	7,724,620	-	-	154	7,724,620
80	166	8,447,277	-	-	166	8,447,277
81	119	6,081,248	-	-	119	6,081,248
82	116	5,687,373	-	-	116	5,687,373
83	91	4,353,291	-	-	91	4,353,291
84	82	3,695,690	-	-	82	3,695,690
85	65	3,222,224	-	-	65	3,222,224
86	60	2,395,965	-	-	60	2,395,965
87	60	2,586,144	-	-	60	2,586,144
88	47	1,928,608	-	-	47	1,928,608
89	32	1,114,776	-	-	32	1,114,776
90	32	974,286	-	-	32	974,286
91	41	1,384,095	-	-	41	1,384,095
92	32	1,161,597	-	-	32	1,161,597
93	23	749,107	-	-	23	749,107
94	15	436,824	-	-	15	436,824
95	12	354,683	-	-	12	354,683
96	8	257,107	-	-	8	257,107
97	2	56,706	-	-	2	56,706
98	1	23,498	-	-	1	23,498
99	2	54,433	-	-	2	54,433
Total	7,563	\$ 410,406,490	103	\$ 5,538,244	7,666	\$ 415,944,734



EXHIBIT II – 2b

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Retirement Allowances Distributed by Age
 FIREFIGHTERS' DISABILITY RETIREES

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
32 & Under	1	\$ 37,454	-	\$ -	1	\$ 37,454
33	-	-	-	-	-	-
34	-	-	-	-	-	-
35	2	91,396	-	-	2	91,396
36	1	37,025	-	-	1	37,025
37	3	70,282	-	-	3	70,282
38	3	104,434	-	-	3	104,434
39	1	29,886	-	-	1	29,886
40	3	82,457	1	33,456	4	115,913
41	5	185,769	4	132,261	9	318,030
42	3	94,742	1	44,626	4	139,368
43	4	145,491	2	41,010	6	186,501
44	10	286,218	-	-	10	286,218
45	11	447,628	1	34,640	12	482,268
46	5	157,530	2	40,703	7	198,233
47	10	390,313	-	-	10	390,313
48	28	1,178,575	3	137,790	31	1,316,365
49	20	781,020	-	-	20	781,020
50	25	1,070,551	2	60,313	27	1,130,864
51	40	1,766,170	3	68,053	43	1,834,223
52	46	1,965,971	1	45,411	47	2,011,381
53	33	1,612,105	6	199,576	39	1,811,681
54	37	1,510,597	3	172,842	40	1,683,439
55	53	2,302,431	5	221,208	58	2,523,640
56	44	2,225,747	4	129,688	48	2,355,436
57	50	2,146,400	6	281,009	56	2,427,409
58	70	3,476,114	9	360,478	79	3,836,592
59	50	2,289,959	3	136,817	53	2,426,776
60	58	2,835,003	7	267,846	65	3,102,848
61	62	2,838,255	4	174,034	66	3,012,289
62	61	3,184,642	5	217,158	66	3,401,800
63	62	3,221,922	2	128,071	64	3,349,993
64	67	3,456,665	7	267,830	74	3,724,494



EXHIBIT II – 2b

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Retirement Allowances Distributed by Age
 FIREFIGHTERS' DISABILITY RETIREES (continued)

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
65	69	\$ 3,519,994	11	\$ 428,246	80	\$ 3,948,240
66	84	4,223,184	3	110,681	87	4,333,865
67	73	3,843,184	3	142,574	76	3,985,758
68	67	3,432,991	5	233,263	72	3,666,253
69	85	4,533,785	3	155,088	88	4,688,873
70	87	4,120,897	4	130,169	91	4,251,066
71	75	3,849,380	1	61,568	76	3,910,949
72	75	3,706,391	2	64,466	77	3,770,858
73	87	4,378,180	2	97,086	89	4,475,267
74	74	3,523,626	2	75,787	76	3,599,413
75	90	4,626,218	-	-	90	4,626,218
76	68	3,223,541	-	-	68	3,223,541
77	49	2,176,302	-	-	49	2,176,302
78	48	2,131,863	-	-	48	2,131,863
79	57	2,411,629	-	-	57	2,411,629
80	49	2,228,499	-	-	49	2,228,499
81	48	2,002,915	-	-	48	2,002,915
82	38	1,696,543	-	-	38	1,696,543
83	37	1,678,005	-	-	37	1,678,005
84	31	1,192,342	-	-	31	1,192,342
85	19	693,986	-	-	19	693,986
86	19	696,008	-	-	19	696,008
87	11	371,677	-	-	11	371,677
88	12	412,469	-	-	12	412,469
89	6	200,294	-	-	6	200,294
90	4	167,404	-	-	4	167,404
91	5	136,009	-	-	5	136,009
92	3	109,975	-	-	3	109,975
93	1	31,325	-	-	1	31,325
94	5	161,783	-	-	5	161,783
95	-	-	-	-	-	-
96	2	57,781	-	-	2	57,781
97	1	30,286	-	-	1	30,286
Total	2,247	\$ 105,591,217	117	\$ 4,693,746	2,364	\$ 110,284,962



EXHIBIT II – 2c

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
Number and Annual Retirement Allowances Distributed by Age
FIREFIGHTERS’ SURVIVORS AND BENEFICIARIES

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
15 & Under	40	\$ 121,104	31	\$ 93,856	71	\$ 214,960
16	2	6,055	5	15,138	7	21,193
17	8	24,221	7	21,193	15	45,414
18	9	64,284	4	12,110	13	76,395
19	10	30,276	11	146,793	21	177,069
20	19	70,752	11	33,304	30	104,056
21	4	12,110	8	100,674	12	112,784
22	-	-	-	-	-	-
23	-	-	-	-	-	-
24	-	-	1	8,759	1	8,759
25	-	-	-	-	-	-
26	1	2,812	2	13,697	3	16,508
27	-	-	-	-	-	-
28	-	-	-	-	-	-
29	1	2,488	1	2,650	2	5,137
30	-	-	3	41,609	3	41,609
31	-	-	1	11,101	1	11,101
32	-	-	2	23,179	2	23,179
33	-	-	2	14,129	2	14,129
34	-	-	3	33,304	3	33,304
35	1	3,028	1	11,101	2	14,129
36	-	-	3	33,304	3	33,304
37	-	-	2	13,103	2	13,103
38	-	-	6	59,285	6	59,285
39	2	9,684	4	28,258	6	37,942
40	1	3,028	4	49,938	5	52,965
41	-	-	4	44,405	4	44,405
42	1	1,894	2	22,202	3	24,096
43	1	1,800	1	11,101	2	12,901



EXHIBIT II – 2c

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
Number and Annual Retirement Allowances Distributed by Age
FIREFIGHTERS’ SURVIVORS AND BENEFICIARIES (continued)

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
44	1	\$ 3,028	4	\$ 68,085	5	\$ 71,112
45	1	1,416	4	44,405	5	45,821
46	1	3,028	2	22,202	3	25,230
47	1	1,416	7	99,956	8	101,372
48	-	-	3	33,304	3	33,304
49	-	-	10	257,764	10	257,764
50	2	7,080	19	314,114	21	321,194
51	4	7,276	13	227,973	17	235,249
52	1	3,028	12	241,899	13	244,927
53	1	3,028	13	207,475	14	210,503
54	4	26,346	19	242,990	23	269,336
55	3	7,471	21	452,881	24	460,352
56	1	11,101	24	304,440	25	315,541
57	-	-	24	344,269	24	344,269
58	-	-	33	536,292	33	536,292
59	1	3,028	32	534,653	33	537,681
60	2	14,129	35	548,501	37	562,630
61	1	3,028	27	369,774	28	372,801
62	-	-	36	477,650	36	477,650
63	4	55,769	38	572,399	42	628,167
64	-	-	46	722,216	46	722,216
65	-	-	60	887,166	60	887,166
66	2	14,129	48	674,052	50	688,181
67	1	3,028	54	834,727	55	837,755
68	-	-	59	740,104	59	740,104
69	-	-	53	650,645	53	650,645
70	-	-	70	1,003,921	70	1,003,921
71	-	-	80	1,158,813	80	1,158,813



EXHIBIT II – 2c

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
Number and Annual Retirement Allowances Distributed by Age
FIREFIGHTERS’ SURVIVORS AND BENEFICIARIES (continued)

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
72	-	\$ -	72	\$ 890,315	72	\$ 890,315
73	-	-	88	1,154,829	88	1,154,829
74	-	-	95	1,218,561	95	1,218,561
75	-	-	114	1,443,865	114	1,443,865
76	1	11,101	108	1,412,911	109	1,424,012
77	1	11,101	80	979,677	81	990,778
78	-	-	86	1,062,950	86	1,062,950
79	-	-	101	1,227,486	101	1,227,486
80	-	-	114	1,356,920	114	1,356,920
81	-	-	123	1,426,220	123	1,426,220
82	-	-	120	1,428,619	120	1,428,619
83	-	-	119	1,372,798	119	1,372,798
84	-	-	81	903,633	81	903,633
85	-	-	104	1,197,853	104	1,197,853
86	-	-	83	951,883	83	951,883
87	-	-	94	1,041,793	94	1,041,793
88	-	-	94	1,072,928	94	1,072,928
89	-	-	86	975,246	86	975,246
90	-	-	75	833,816	75	833,816
91	-	-	44	455,084	44	455,084
92	-	-	85	947,301	85	947,301
93	-	-	39	454,172	39	454,172
94	-	-	47	732,584	47	732,584
95	-	-	34	372,329	34	372,329
96	-	-	30	299,203	30	299,203
97	-	-	20	202,301	20	202,301
98	-	-	11	122,113	11	122,113
99	-	-	7	71,805	7	71,805
100	-	-	5	67,848	5	67,848
101	-	-	5	49,077	5	49,077
102	-	-	1	11,101	1	11,101
103	-	-	3	33,304	3	33,304
104	-	-	-	-	-	-
105	-	-	-	-	-	-
106	-	-	-	-	-	-
Total	133	\$ 543,063	3,133	\$ 39,187,386	3,266	\$ 39,730,449



EXHIBIT III – 1a

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
Number and Annual Retirement Allowances Distributed by Age
TOTAL SERVICE RETIREES

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
46	-	\$ -	-	\$ -	-	\$ -
47	-	-	-	-	-	-
48	35	1,785,205	-	-	35	1,785,205
49	62	3,117,474	7	408,697	69	3,526,172
50	103	5,048,872	6	331,501	109	5,380,373
51	166	8,154,745	9	440,424	175	8,595,169
52	186	8,994,708	16	874,211	202	9,868,919
53	210	10,272,445	19	1,017,996	229	11,290,441
54	260	12,434,754	25	1,243,906	285	13,678,660
55	293	14,667,050	32	1,655,910	325	16,322,960
56	427	21,572,031	34	1,763,480	461	23,335,511
57	522	26,986,264	33	1,660,244	555	28,646,508
58	607	31,574,427	44	2,257,541	651	33,831,968
59	558	29,308,853	41	2,022,376	599	31,331,229
60	604	33,399,082	33	1,673,215	637	35,072,297
61	622	34,024,097	49	2,698,540	671	36,722,638
62	586	33,271,719	36	1,959,293	622	35,231,012
63	610	35,073,939	33	1,955,552	643	37,029,491
64	621	36,098,770	46	2,634,776	667	38,733,545
65	643	37,425,406	42	2,156,403	685	39,581,809
66	667	38,741,622	42	2,331,002	709	41,072,624
67	685	39,941,993	36	2,112,966	721	42,054,960
68	666	39,062,528	37	2,089,632	703	41,152,160
69	600	34,929,045	30	1,697,927	630	36,626,971
70	579	33,518,611	28	1,605,794	607	35,124,405
71	588	34,371,165	22	1,257,090	610	35,628,255
72	568	32,216,467	18	993,324	586	33,209,791
73	523	29,772,274	18	967,506	541	30,739,780



EXHIBIT III – 1a

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
Number and Annual Retirement Allowances Distributed by Age
TOTAL SERVICE RETIREES (continued)

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
74	542	\$ 31,388,093	13	\$ 731,175	555	\$ 32,119,268
75	609	34,169,814	14	855,692	623	35,025,506
76	510	27,770,260	4	229,119	514	27,999,379
77	351	18,886,149	12	626,281	363	19,512,430
78	368	19,490,767	7	407,645	375	19,898,412
79	359	18,323,557	2	74,020	361	18,397,577
80	356	17,854,944	3	131,584	359	17,986,528
81	308	15,231,531	3	161,117	311	15,392,648
82	245	11,479,546	3	117,897	248	11,597,443
83	202	9,302,156	-	-	202	9,302,156
84	183	8,012,440	-	-	183	8,012,440
85	144	6,647,445	-	-	144	6,647,445
86	116	4,860,426	2	68,643	118	4,929,069
87	118	4,897,819	-	-	118	4,897,819
88	93	3,698,799	-	-	93	3,698,799
89	73	2,641,595	2	42,063	75	2,683,657
90	59	1,879,037	2	54,505	61	1,933,542
91	64	2,101,802	-	-	64	2,101,802
92	44	1,595,448	-	-	44	1,595,448
93	35	1,139,173	-	-	35	1,139,173
94	29	2,132,734	-	-	29	2,132,734
95	16	478,280	-	-	16	478,280
96	15	445,547	-	-	15	445,547
97	6	182,169	-	-	6	182,169
98	4	97,686	-	-	4	97,686
99	5	125,370	-	-	5	125,370
Total	16,845	\$ 910,596,135	803	\$ 43,309,046	17,648	\$ 953,905,180



EXHIBIT III – 1b

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Retirement Allowances Distributed by Age
 TOTAL DISABILITY RETIREES

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
32 & Under	4	\$ 152,625	-	\$ -	4	\$ 152,625
33	-	-	-	-	-	-
34	-	-	-	-	-	-
35	4	138,220	-	-	4	138,220
36	2	53,726	-	-	2	53,726
37	6	183,483	-	-	6	183,483
38	7	245,580	-	-	7	245,580
39	4	119,177	3	88,650	7	207,826
40	8	274,313	4	134,589	12	408,903
41	11	463,267	6	189,692	17	652,959
42	13	448,667	3	82,898	16	531,565
43	17	519,962	5	101,563	22	621,525
44	25	803,252	2	65,294	27	868,546
45	30	1,211,833	5	198,229	35	1,410,062
46	23	783,355	7	243,517	30	1,026,872
47	39	1,521,917	12	457,017	51	1,978,934
48	61	2,406,876	8	319,764	69	2,726,641
49	52	2,031,531	13	462,394	65	2,493,925
50	73	2,968,047	14	443,071	87	3,411,118
51	97	4,160,279	15	548,961	112	4,709,240
52	111	4,731,412	21	864,967	132	5,596,379
53	94	4,007,639	23	868,883	117	4,876,522
54	117	5,027,159	23	959,365	140	5,986,524
55	145	6,313,640	17	648,175	162	6,961,815
56	123	5,625,145	20	759,122	143	6,384,267
57	131	5,962,947	27	1,154,795	158	7,117,742
58	154	7,178,215	34	1,350,631	188	8,528,846
59	114	5,219,892	22	1,030,768	136	6,250,660
60	116	5,647,675	25	1,027,104	141	6,674,779
61	137	6,308,520	19	804,854	156	7,113,374
62	131	6,639,859	15	713,283	146	7,353,142
63	126	6,396,877	13	629,748	139	7,026,625
64	144	7,229,157	25	1,161,063	169	8,390,220



EXHIBIT III – 1b

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Retirement Allowances Distributed by Age
 TOTAL DISABILITY RETIREES (continued)

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
65	168	\$ 8,600,574	36	\$ 1,622,244	204	\$ 10,222,817
66	154	7,592,241	30	1,259,251	184	8,851,492
67	146	7,209,974	26	1,195,935	172	8,405,909
68	170	8,521,491	21	869,517	191	9,391,008
69	171	8,778,622	27	1,266,400	198	10,045,022
70	176	8,348,930	21	948,786	197	9,297,716
71	179	8,545,515	10	540,712	189	9,086,226
72	167	7,808,672	17	739,700	184	8,548,372
73	177	8,348,601	19	842,832	196	9,191,432
74	162	7,645,405	13	601,588	175	8,246,993
75	212	10,062,388	8	296,266	220	10,358,654
76	162	7,329,306	10	403,416	172	7,732,722
77	122	5,443,566	2	74,004	124	5,517,571
78	101	4,346,267	3	132,506	104	4,478,773
79	128	5,275,576	1	38,217	129	5,313,793
80	95	3,950,778	3	93,359	98	4,044,137
81	87	3,587,905	1	44,598	88	3,632,503
82	73	3,093,628	-	-	73	3,093,628
83	73	2,969,886	-	-	73	2,969,886
84	59	2,124,082	2	114,378	61	2,238,461
85	42	1,566,811	-	-	42	1,566,811
86	35	1,244,403	-	-	35	1,244,403
87	33	1,034,359	-	-	33	1,034,359
88	22	753,130	-	-	22	753,130
89	7	221,756	-	-	7	221,756
90	8	272,555	-	-	8	272,555
91	12	316,038	-	-	12	316,038
92	7	227,178	-	-	7	227,178
93	3	78,106	-	-	3	78,106
94	7	216,940	-	-	7	216,940
95	-	-	-	-	-	-
96	5	116,879	-	-	5	116,879
97	1	30,286	-	-	1	30,286
98	-	-	-	-	-	-
99	1	21,082	-	-	1	21,082
Total	5,084	\$ 230,457,179	631	\$ 26,392,106	5,715	\$ 256,849,285



EXHIBIT III – 1c

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
Number and Annual Retirement Allowances Distributed by Age
TOTAL SURVIVORS AND BENEFICIARIES

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
15 & Under	86	\$ 260,266	67	\$ 216,964	153	\$ 477,229
16	15	45,414	17	51,469	32	96,883
17	21	63,580	17	51,469	38	115,049
18	20	97,588	14	42,386	34	139,974
19	25	75,690	21	177,069	46	252,759
20	30	123,205	25	75,690	55	198,895
21	19	105,687	16	124,895	35	230,581
22	2	5,947	1	3,028	3	8,975
23	-	-	1	2,812	1	2,812
24	4	26,165	2	17,226	6	43,391
25	2	25,196	1	14,328	3	39,524
26	6	16,438	3	16,292	9	32,730
27	-	-	2	5,407	2	5,407
28	1	2,664	-	-	1	2,664
29	4	10,613	1	2,650	5	13,262
30	1	2,866	3	41,609	4	44,475
31	1	3,028	3	33,304	4	36,331
32	4	10,598	4	45,382	8	55,980
33	3	7,571	5	31,285	8	38,856
34	1	2,326	3	33,304	4	35,629
35	1	3,028	3	25,230	4	28,258
36	4	77,378	6	66,607	10	143,985
37	-	-	7	48,762	7	48,762
38	3	7,873	11	142,383	14	150,256
39	2	9,684	5	39,359	7	49,043
40	2	6,055	7	83,241	9	89,296
41	1	14,941	7	77,708	8	92,649
42	4	37,740	6	50,460	10	88,200
43	3	7,855	5	55,506	8	63,361



EXHIBIT III – 1c

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Retirement Allowances Distributed by Age
 TOTAL SURVIVORS AND BENEFICIARIES (continued)

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
44	1	\$ 3,028	9	\$ 123,591	10	\$ 126,618
45	2	4,444	11	122,663	13	127,106
46	2	4,444	13	215,095	15	219,538
47	1	1,416	16	210,399	17	211,815
48	1	1,416	15	166,518	16	167,934
49	3	5,860	25	473,061	28	478,921
50	5	27,188	30	471,306	35	498,493
51	6	41,444	32	499,730	38	541,175
52	3	7,276	35	662,518	38	669,794
53	6	48,162	43	641,414	49	689,575
54	7	32,206	48	619,069	55	651,275
55	8	67,685	60	1,065,072	68	1,132,756
56	5	35,536	52	722,450	57	757,986
57	1	3,028	58	902,715	59	905,743
58	-	-	87	1,289,685	87	1,289,685
59	4	28,258	69	1,069,064	73	1,097,322
60	4	28,258	96	1,378,722	100	1,406,979
61	4	27,301	77	1,078,247	81	1,105,549
62	5	92,262	90	1,201,066	95	1,293,328
63	6	108,249	90	1,305,393	96	1,413,643
64	2	22,202	131	2,035,193	133	2,057,395
65	4	54,631	152	2,238,403	156	2,293,034
66	6	64,838	125	1,693,314	131	1,758,152
67	2	14,129	148	2,025,574	150	2,039,703
68	-	-	156	1,995,779	156	1,995,779
69	2	22,202	189	2,507,531	191	2,529,734
70	-	-	218	2,984,509	218	2,984,509
71	1	11,101	215	2,952,297	216	2,963,398
72	4	68,936	205	2,513,368	209	2,582,304



EXHIBIT III – 1c

RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023
 Number and Annual Retirement Allowances Distributed by Age
 TOTAL SURVIVORS AND BENEFICIARIES (continued)

Age	Male		Female		Total	
	Number	Annuities	Number	Annuities	Number	Annuities
73	2	\$ 22,202	274	\$ 3,709,667	276	\$ 3,731,870
74	-	-	272	3,604,989	272	3,604,989
75	1	11,101	297	3,671,830	298	3,682,931
76	2	22,202	239	3,006,976	241	3,029,178
77	2	44,617	178	2,156,916	180	2,201,532
78	1	11,101	221	2,741,015	222	2,752,116
79	1	11,101	278	3,434,034	279	3,445,135
80	2	22,202	285	3,340,114	287	3,362,316
81	1	11,101	285	3,395,467	286	3,406,568
82	2	14,129	248	2,906,940	250	2,921,069
83	1	27,754	236	2,761,840	237	2,789,594
84	-	-	206	2,325,409	206	2,325,409
85	1	11,101	222	2,530,587	223	2,541,688
86	-	-	194	2,200,274	194	2,200,274
87	-	-	206	2,300,824	206	2,300,824
88	1	11,101	158	1,775,288	159	1,786,389
89	1	11,101	150	1,672,481	151	1,683,582
90	-	-	138	1,557,725	138	1,557,725
91	-	-	109	1,206,950	109	1,206,950
92	-	-	146	1,662,986	146	1,662,986
93	1	11,101	82	954,386	83	965,487
94	-	-	85	1,146,176	85	1,146,176
95	-	-	66	726,277	66	726,277
96	-	-	55	566,468	55	566,468
97	-	-	25	250,265	25	250,265
98	-	-	23	261,578	23	261,578
99	-	-	16	162,643	16	162,643
100	-	-	5	67,848	5	67,848
101	-	-	9	92,888	9	92,888
102	-	-	6	59,279	6	59,279
103	-	-	3	33,304	3	33,304
Total	379	\$ 2,116,807	7,475	\$ 93,022,994	7,854	\$ 95,139,801