

# **Delaware County & Municipal Police/ Firefighters Pension Plan**

## **Actuarial Valuation as of June 30, 2023**

**Produced by Cheiron**

**December 2023**

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December 27, 2023

Board of Pension Trustees  
State of Delaware  
McArdle Building  
860 Silver Lake Boulevard, Suite 1  
Dover, Delaware 19904

Dear Members of the Board:

At your request, we have conducted the annual actuarial valuation of the Delaware County & Municipal Police/Firefighters Pension Plan (Plan) as of June 30, 2023. The results of this valuation are contained in this report. The purpose of the valuation is discussed in the Foreword.

This report contains information on Plan assets and liabilities, as well as analyses combining asset and liability performance and projections. It also discloses employer contribution levels and certain required disclosures under the Governmental Accounting Standards Board (GASB) Statement No. 67.

In completing the valuation and preparing our report, we relied on information, some oral and some written, supplied by the staff of the Office of Pensions. This information includes, but is not limited to, the Plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

The contribution results of this report are only applicable to the employer contributions for Fiscal Year (FY) 2025 and rely on future Plan experience conforming to the underlying assumptions. Future experience may differ significantly from the current experience due to such factors as the following: Plan experience differing from that anticipated by the assumptions, changes in assumptions, and changes in Plan provisions or applicable law.

This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices that are consistent with our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations, including the use of assumptions and methods for funding purposes that comply with the Actuarial Standards of Practice. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinions contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

Board of Pension Trustees

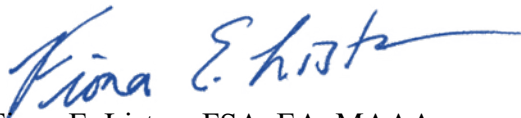
December 27, 2023

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This report was prepared for the Delaware County & Municipal Police/Firefighters Pension Plan for the purposes described herein and for the use by the Plan's auditor in completing an audit related to the matters herein. Other users of this valuation report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

Sincerely,

Cheiron



Fiona E. Liston, FSA, EA, MAAA  
Principal Consulting Actuary



Elizabeth Wiley, FSA, EA, MAAA, FCA  
Consulting Actuary

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023  
FOREWORD**

Cheiron has performed the annual actuarial valuation of the Delaware County & Municipal Police/Firefighters Pension Plan (Plan) as of June 30, 2023. The purpose of this report is to:

- 1) **Measure and disclose**, as of the valuation date, the financial condition of the Plan,
- 2) **Indicate trends** in the financial condition of the Plan,
- 3) **Determine the contribution rate** to be paid by the participating employers for Fiscal Year (FY) 2025, and
- 4) **Provide** certain accounting statement information.

An actuarial valuation establishes and analyzes plan assets and liabilities on a consistent basis and traces the progress of both from one year to the next. It includes measurement of the plan's investment performance as well as an analysis of liability gains and losses.

**Section I** presents a summary containing our findings and discloses important trends experienced by the Plan in recent years.

**Section II** reviews the primary risks facing the Plan and quantifies these using various risk and maturity measures.

**Section III** contains details on various asset measures, together with pertinent performance measurements.

**Section IV** shows similar information on liabilities, measured for actuarial, accounting, and governmental reporting purposes.

**Section V** presents the FY 2025 actuarially determined contribution for participating employers.

**Section VI** includes certain required disclosures under Governmental Accounting Standards Board (GASB) Statement No. 67 and items recommended by the Government Finance Officers Association (GFOA).

The appendices to this report contain a summary of the Plan's membership at the valuation date, a summary of the major provisions of the Plan, and a summary of the actuarial methods and assumptions used in the valuation.

The actuarial assumptions reflect our understanding of the likely future experience of the Plan, and the assumptions individually and as a whole represent our best estimate for the future experience of the Plan. The results of this report rely on future Plan experience conforming to the underlying assumptions and methods outlined in this report. To the extent that the actual Plan experience deviates from the underlying assumptions and methods, or there are any changes in Plan provisions, the true cost of the Plan will vary from our results.

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**SECTION I – BOARD SUMMARY**

**General Comments**

The actuarially determined contribution (ADC) rate was calculated to increase from 12.74% for FY 2024 to 14.98% for FY 2025.

During the year ended June 30, 2023, the Plan's assets earned 5.1% on a market value basis. However, due to the Plan's asset smoothing method, which recognizes portions of the investment gains and losses over time, the return on an actuarial value basis was 6.5%. Although more than the return on a market value basis, this return was less than the assumed investment rate of return of 7.0% for the prior year, resulting in an actuarial loss on investments of \$2.9 million.

The Plan experienced an actuarial loss on Plan liabilities resulting from salary increases different from those assumed and members retiring, terminating, becoming disabled, and dying at rates different from the actuarial assumptions. This liability loss increased the actuarial liability by \$17.1 million, 2.9% of the total actuarial liability. This relatively large actuarial loss was primarily caused by pay in excess of the assumed salary increases.

This valuation report also contains certain information to be reported in the June 30, 2023 Annual Comprehensive Financial Report (ACFR) of the Delaware Public Employees' Retirement System (Delaware PERS) under GASB Statement No. 67, as well as additional disclosure information recommended by the Government Finance Officers Association (GFOA). The GASB disclosures are based on the use of updated procedures to roll forward the 2022 actuarial valuation liability results. The calculation of net pension liability in Section VI is shown as disclosed for the plan year ending June 30, 2023, based on the 2022 funding actuarial valuation liability results, updated by the roll forward. We also present a projection of the June 30, 2024 disclosure in Section VI, assuming all actuarial assumptions are exactly met over the coming year, which is based on the 2023 funding actuarial valuation liability results.

As of the June 30, 2023 funding actuarial valuation, the unfunded actuarial liability (UAL) was \$19.8 million. This is an increase from the \$1.0 million surplus in the funding valuation for the prior year.

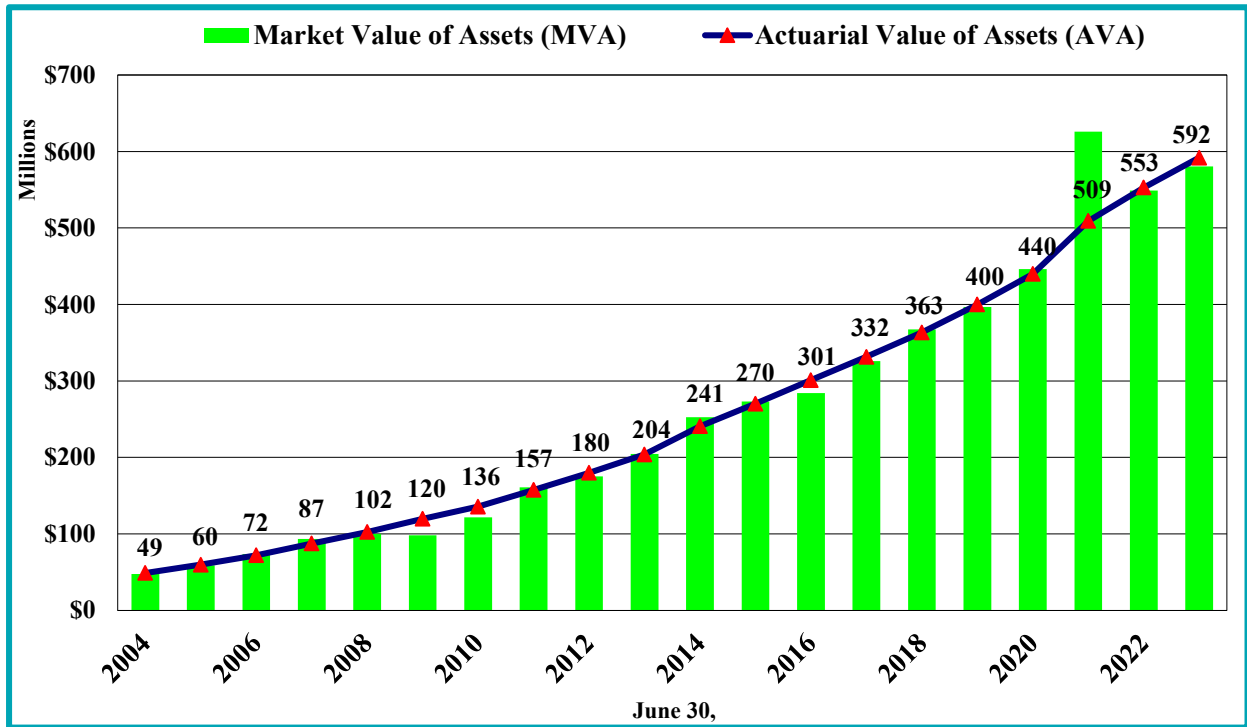
DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023

SECTION I – BOARD SUMMARY

Trends

Asset Returns

The graph below shows measurements of the Plan’s assets over the last 20 years based on both market values and actuarial values. The green bars represent the market value measurements, while the blue line shows the smoothed actuarial value measurements. The black labels above the blue line are the actuarial value of asset measurements as of the valuation date for each year in millions of dollars.



The market value of assets (MVA) returned 5.1% over the last year. The determination of the Plan’s actuarial value of assets (AVA) for the current year reflects a portion of the return below the 7.0% assumed for the prior year, and continued recognition of prior years’ gains and losses, with the combined effect of returning 6.5% over FY 2023.

Over the period July 1, 2004 to June 30, 2023, the Plan’s assets, measured using the actuarial value of assets measurements returned a compound 7.6%, compared to the current valuation assumption of 7.0%. On a market value of assets basis, the Plan returned 7.5% over the same period.

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

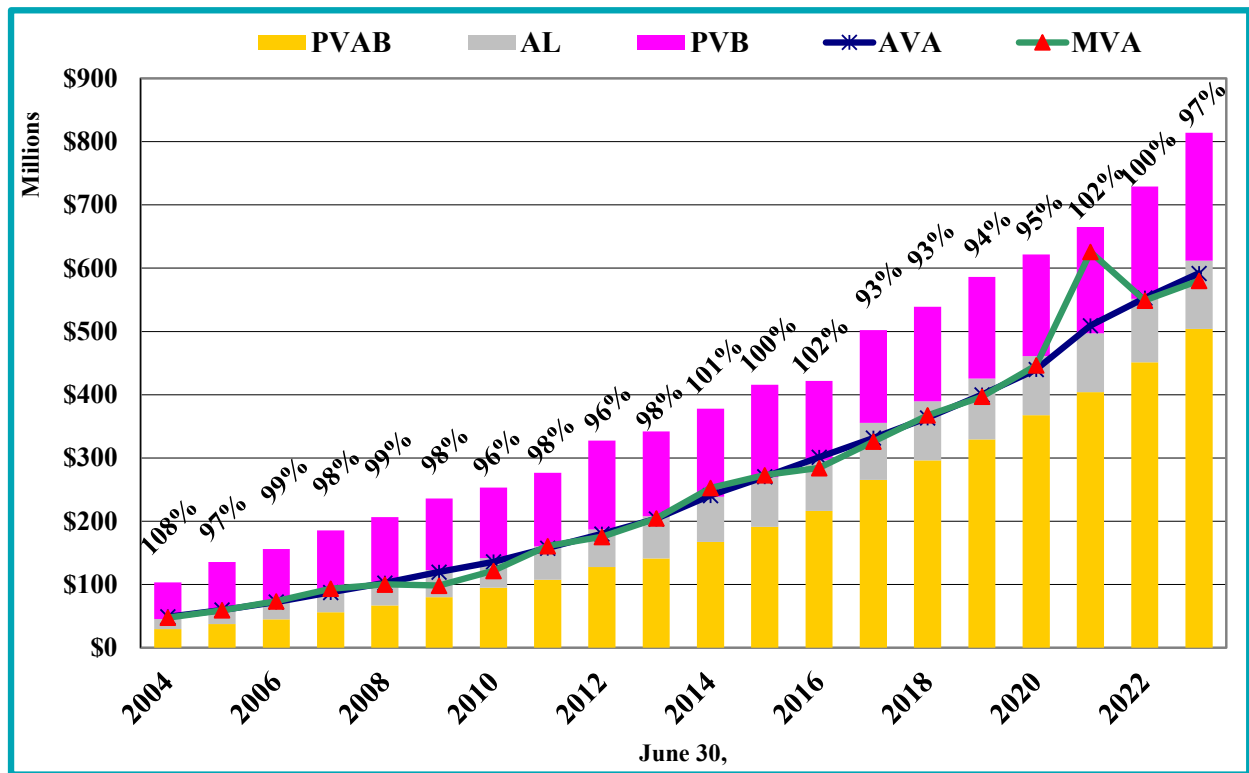
**SECTION I – BOARD SUMMARY**

Assets and Liabilities

The three colored bars below represent the three different measures of liability discussed in this report. The first measure is given by the yellow bars, the present value of accrued benefits (PVAB). The PVAB values represent the value of all benefits earned by current members through the valuation date. These values do not reflect any future additional service or salary increases for current members beyond the valuation dates.

The second liability measure shown is the one currently used for the Plan’s funding target, the actuarial liability (AL). These target amounts are represented by the top of the gray bars. This measurement is also the basis of the liability measure used in GASB 67. The funded ratios reported by the Plan are the percentages shown above the bars and are developed by comparing the actuarial value to assets to these target measurements of liability at each valuation date.

The amount represented by the top of the pink bars, the present value of future benefits (PVB), is the amount needed as of each valuation date to provide all benefits for the current members and their beneficiaries, including reflection of assumed future service and pay increases. If the Plan had assets equal to the PVB as of a certain date, no additional contributions would, in theory, be needed to pay the benefits of the current members if all assumptions were exactly met from that point forward.



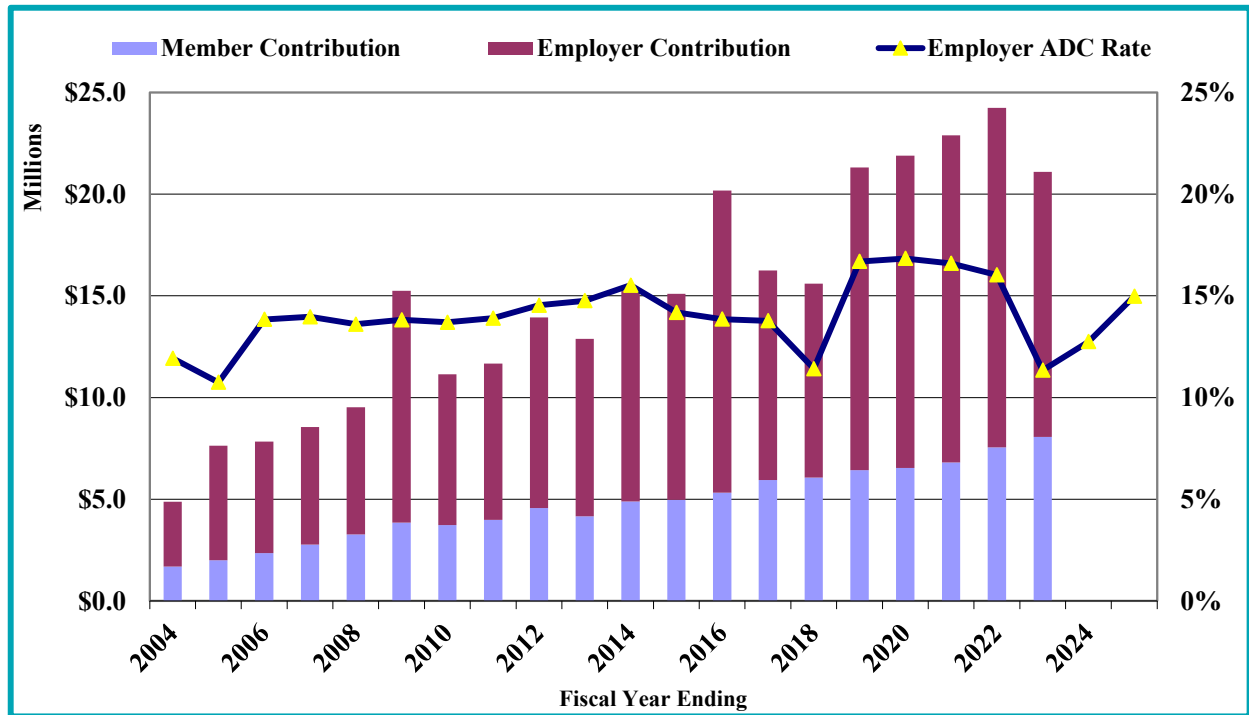
Funded ratios shown are the AVA as a percentage of AL, and values would be different if presented as MVA as a percentage of AL.



**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**SECTION I – BOARD SUMMARY**

Contribution Rates



The stacked bars in the graph above show the actual dollar amounts of the contributions made by the participating employers and the members for each fiscal year and are read using the left-hand scale. The blue line shows the employer actuarially determined contribution (ADC) rate for each fiscal year as a percentage of payroll and is read using the right-hand scale.

The member contribution rate is set by State law, based on the plan in which the member participates. The participating employer contribution rate is set by the actuarial process. Please note that there is a lag between the calculation of the employer contribution rates shown and when they are payable. For example, the value shown for FY 2023 is the rate prepared by the June 30, 2021 valuation and implemented for the period July 1, 2022 to June 30, 2023. As such, there are two more years of rates shown beyond the years of actual contributions.

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

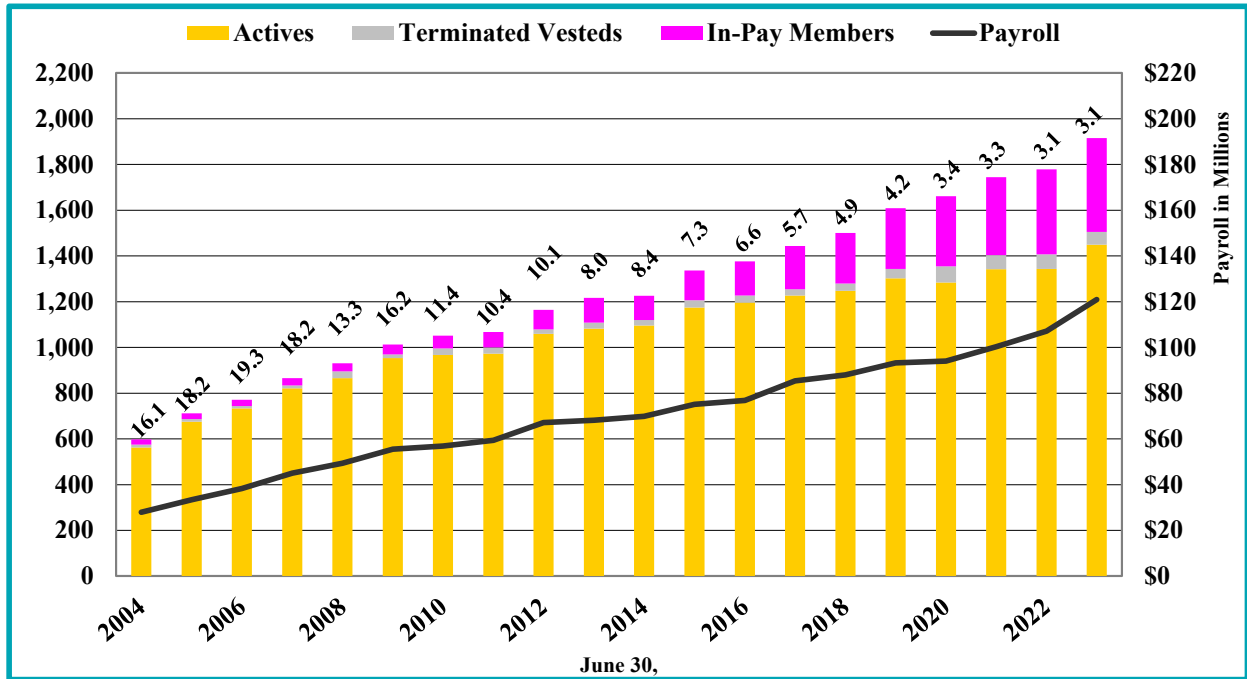
**SECTION I – BOARD SUMMARY**

Participant Trends

The bars below show the number of members as of each valuation date, divided between active members, terminated vested members, and retirees/beneficiaries. These bars are read using the left-hand scale. Since this is a relatively young plan, there are still many more actives than there are retirees. However, as this plan continues to mature, this plan will continue to show growth in the number of inactive members. The numbers that appear above each bar represent the ratio of active members to inactive members (retirees, beneficiaries, and terminated vested members) at each valuation date. The active-to-inactive ratio has decreased from 16.1 actives for each inactive in 2004 to 3.1 actives for each inactive in 2023.

From July 1, 2022 through July 1, 2023, several groups of employers switched from the County & Municipal Employees’ Pension Plan to the County & Municipal Police/Firefighters Plan, contributing to the increase in active participants in the 2023 valuation.

The black line shows the covered payroll for the Plan as of each valuation date and is read using the right-hand scale.

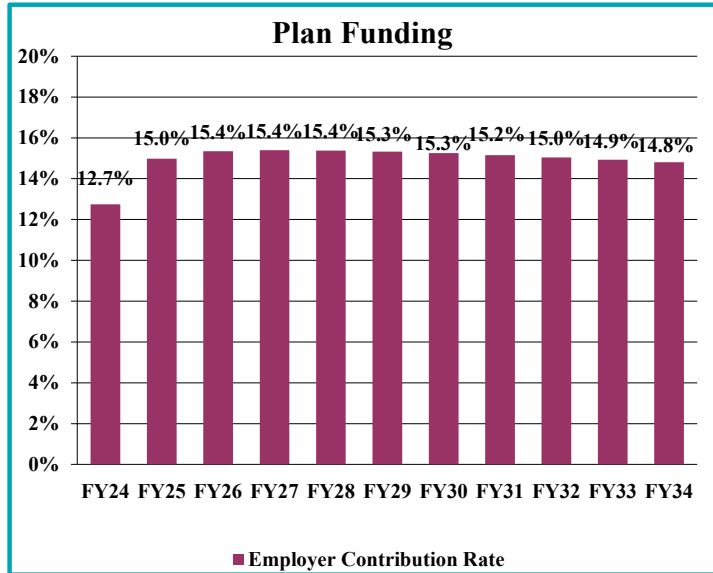


**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**SECTION I – BOARD SUMMARY**

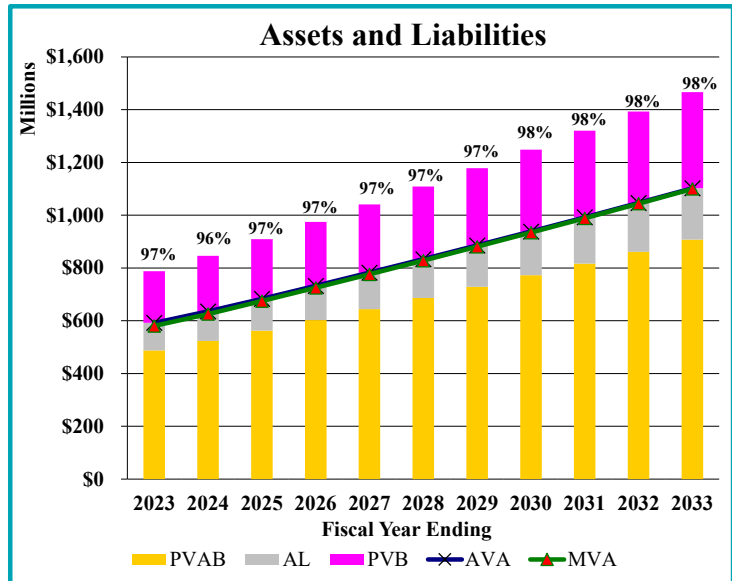
**Future Outlook**

Baseline Projections



These graphs show the expected progress of the Plan over the next 10 years, assuming the Plan’s assets earn 7.0% on a *market value* basis and assuming all other assumptions are exactly met, including that the actuarially determined contribution (ADC) amounts are made in full. The chart entitled “Plan Funding” shows the increase to 15.4% for FY25 based on this year’s valuation, followed by a slight decrease to the projected employer ADC rate around 14.8% by the end of the period.

The “Assets and Liabilities” graph shows the projected funded ratios for the Plan over the 10-year projection period. The Plan’s funded status is projected to remain at 100% over the 10-year projection period, assuming all assumptions are exactly met.

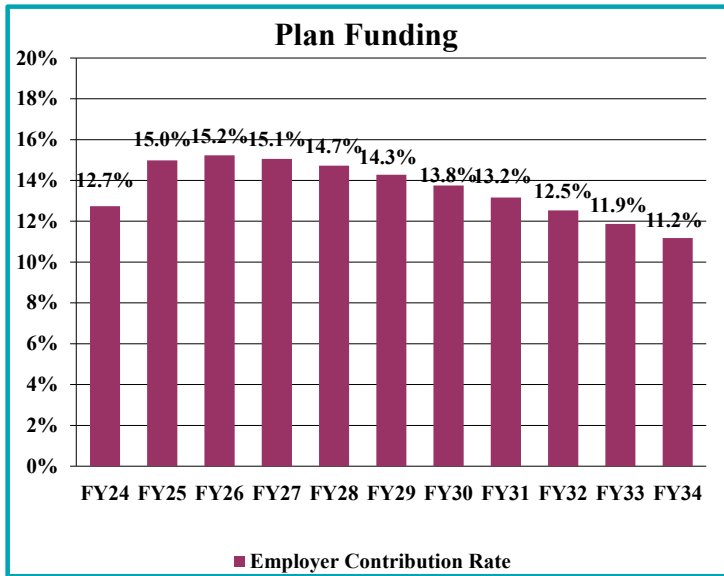


Funded ratios shown are the AVA as a percentage of AL, and values would be different if presented as MVA as a percentage of AL.

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**SECTION I – BOARD SUMMARY**

Projections with Asset Returns of 8.0%

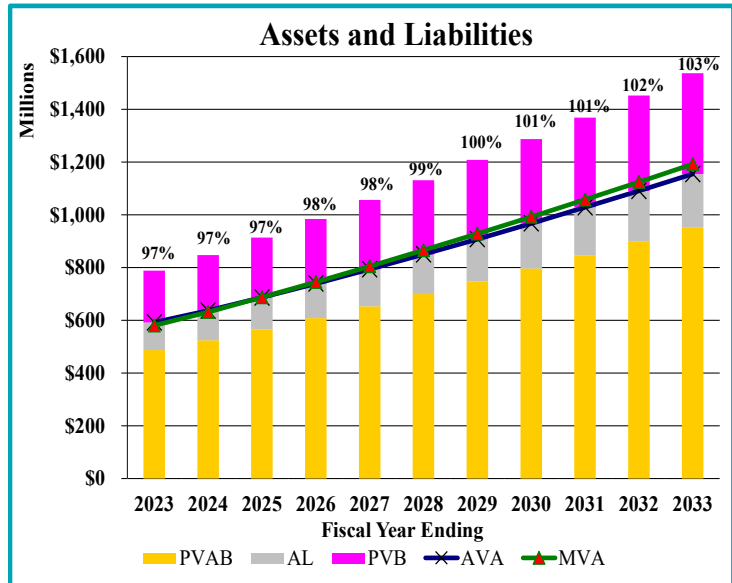


The Plan’s investment earnings will affect the future funding status of the Plan. The two graphs on this page show what the next 10 years are expected to look like if the Plan’s investment performance is 8.0% each year, 1.0% higher than the valuation investment rate of return assumption.

These two graphs assume all other assumptions are exactly met, including participating employer contributions made equal to the full actuarially determined amounts.

The “Plan Funding” graph shows that under this scenario, the employer ADC rate would increase to 15.2% in FY26 and then decrease to 11.2% of payroll at the end of the projection period.

The “Assets and Liabilities” graph shows that under this scenario, the Plan would reach a 103% funded ratio by 2033, an improvement over the baseline scenario’s ultimate level of 98%.

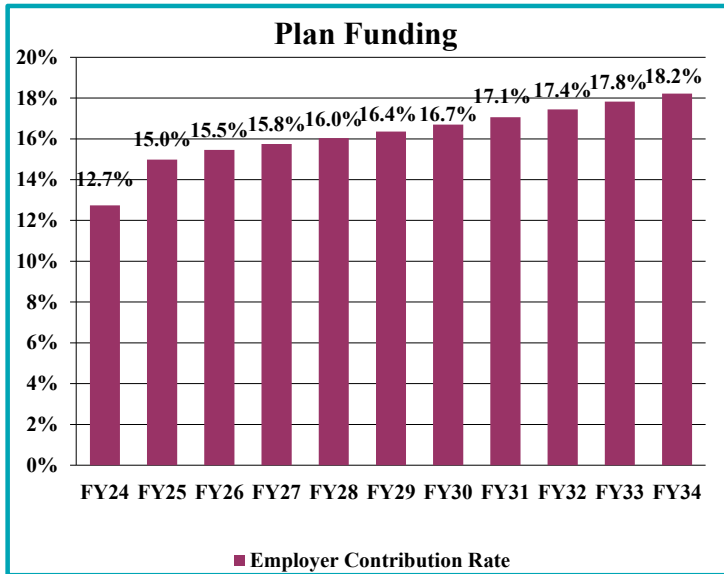


Funded ratios shown are the AVA as a percentage of AL, and values would be different if presented as MVA as a percentage of AL.

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**SECTION I – BOARD SUMMARY**

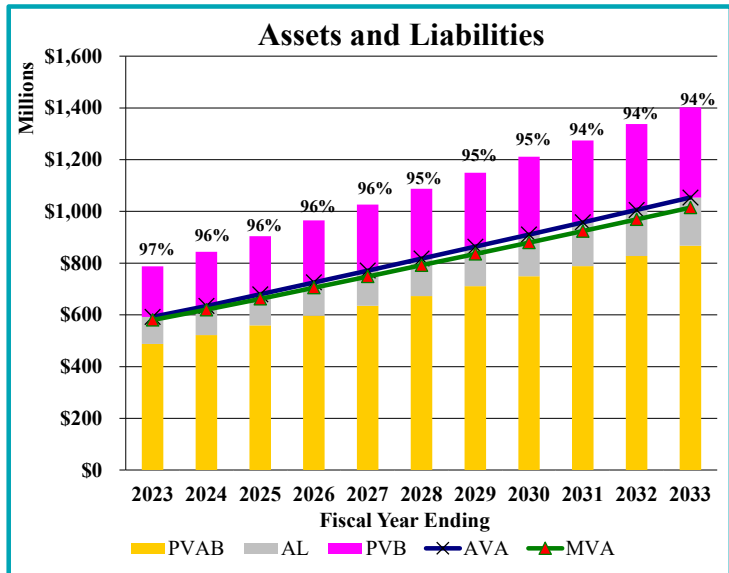
Projections with Asset Returns of 6.0%



The graphs on this page show projections of the Plan’s funding status and contributions assuming that the Plan’s investment performance is 6.0% each year of the projection, 1.0% lower than the valuation investment rate of return assumption.

Note that these projections assume all other assumptions are exactly met, including payment of participating employer contributions made equal to the full actuarially determined contribution.

Under this scenario, the employer ADC rate increases to approximately 18.2% of payroll by the end of the 10-year projection period, significantly greater than the 14.8% ultimate rate in the baseline projection. Additionally, the funded ratio is projected to decrease to 94% over the 10-year projection period, thus ending lower than the 98% ultimate funded ratio in the baseline scenario.



Funded ratios shown are the AVA as a percentage of AL, and values would be different if presented as MVA as a percentage of AL.

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**SECTION I – BOARD SUMMARY**

**Table I-1  
Summary of Principal Plan Results**

<b>Valuation as of:</b>	<b>June 30, 2022</b>	<b>June 30, 2023</b>	<b>% Change</b>
<b><u>Member Counts</u></b>			
Active Members	1,343	1,449	7.89%
Disabled Members	52	56	7.69%
Retirees and Beneficiaries	320	355	10.94%
Terminated Vested Members	64	66	3.13%
Terminated Non-Vested Members	28	32	14.29%
<b>Total Member Counts</b>	<b>1,807</b>	<b>1,958</b>	<b>8.36%</b>
Covered Payroll of Active Members*	\$ 107,115,500	\$ 120,990,700	12.95%
Annual Benefit Payments for Retirees, Disabled Members, and Beneficiaries	\$ 15,415,000	\$ 17,501,500	13.54%
<b><u>Assets and Liabilities</u></b>			
Actuarial Liability (AL)	\$ 551,825,700	\$ 611,808,500	10.87%
Actuarial Value of Assets (AVA)	552,836,500	591,989,800	7.08%
Unfunded AL (UAL)	\$ (1,010,800)	\$ 19,818,700	2,060.69%
Funded Ratio on AVA Basis (AVA/AL)	100.2%	96.8%	
Funded Ratio on MVA Basis (MVA/AL)	99.5%	94.9%	
Present Value of Accrued Benefits (PVAB)	\$ 451,399,100	\$ 503,767,700	11.60%
Market Value of Assets (MVA)	548,995,500	580,347,500	5.71%
Unfunded PVAB	\$ (97,596,400)	\$ (76,579,800)	21.53%
Accrued Benefit Funded Ratio (MVA/PVAB)	121.6%	115.2%	
<b><u>Employer Contribution Rate</u></b>			
	<b>Fiscal Year 2024</b>	<b>Fiscal Year 2025</b>	
Entry Age Normal Cost	12.66%	12.74%	
UAL Amortization Payment	(0.12%)	2.04%	
Administrative Expense	0.20%	0.20%	
Actuarially Determined Contribution (ADC)	12.74%	14.98%	

\* Assumes one year of payroll increase projection, representing payroll beginning on each valuation date.

## SECTION II – RISK DISCLOSURE

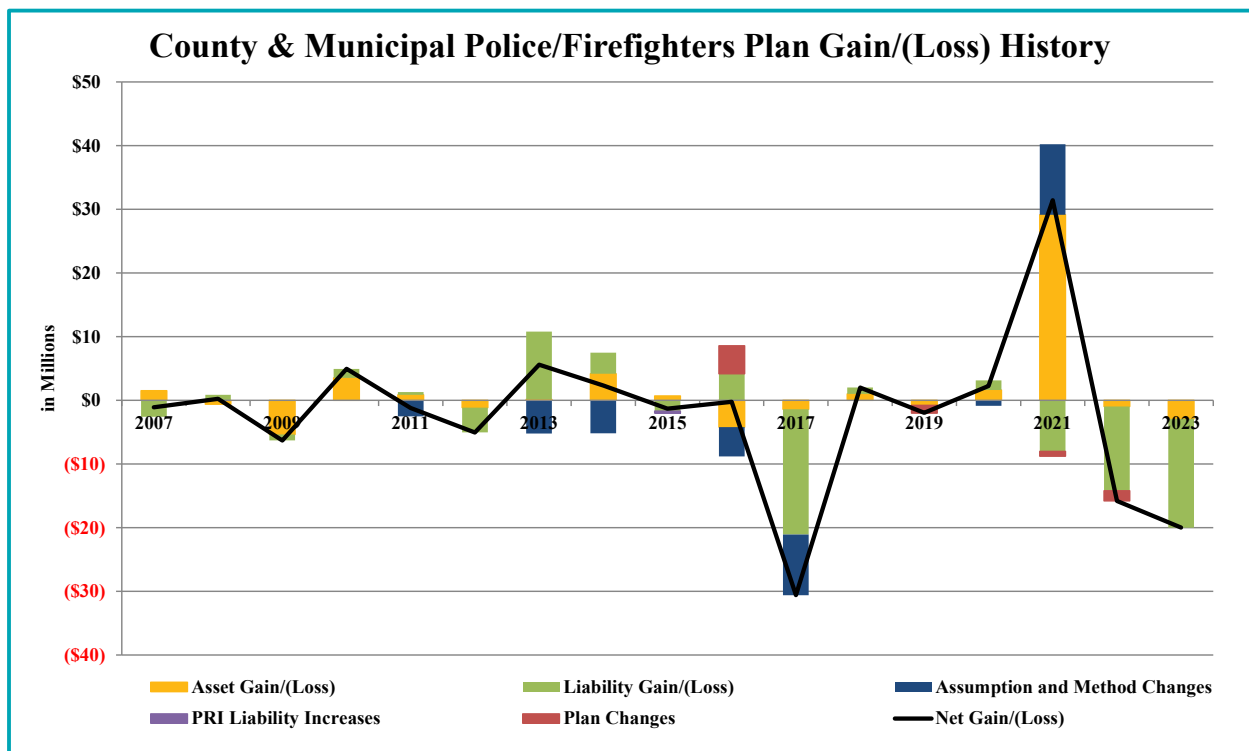
### Introduction

The Plan’s actuarial valuation results are dependent on assumptions about future economic and demographic experience. Based on actuarial standards of practice, the assumptions represent a reasonable estimate for future experience. However, actual future experience will never conform exactly to the assumptions and may differ significantly from the assumptions. This deviation is the risk that pension plan sponsors undertake in relying on a pension plan’s actuarial valuation results.

This section of this report is intended to identify the primary drivers of these risks, provide background information and assessments about these identified risks, and communicate the significance of these risks to this plan.

### Historical Experience

For this plan, the two primary measurements where there is risk that the actual measurements will significantly differ from the expected future measurements are in the measurements of the liabilities of the Plan and the resulting calculation of the actuarially determined contributions. Therefore, while future experience will not be the same as past experience, it is useful to look at what factors have contributed to the actual liability measurements at each valuation date deviating from that which was predicted by the prior year’s valuation. The following graph shows the gains/(losses) for each valuation date between the actual unfunded liability measurement and the expected unfunded liability broken down by cause.



## SECTION II – RISK DISCLOSURE

This shows that the liability and asset gains/(losses) have been the most significant risk for the Plan for any given year over this period. This is still a relatively young plan and so gains and losses are magnified in their impact on plan costs. As the plan continues to mature, we anticipate the impact of these will lessen, as a more consistent plan population emerges.

### Risk Identification

Considering the specific characteristics of the Plan, the assumptions and methods used in the actuarial valuations for the Plan, and the recent history, we have identified the risks that we think are the most significant in terms of possibly leading to actual values of the measurements deviating from those expected by the valuation process, as follows:

- Investment risk,
- Longevity and other demographic risk, and
- Assumption change risk.

While we have identified these risks as potentially significant in regard to actual measurements deviating from expected, it is possible that there are other risks that we have not identified that will turn out to be significant.

*Investment Risk* is the potential for investment returns to be different than anticipated. In the case of this plan, that is the risk that the returns on assets will be materially different from the 7.0% that is currently assumed. If actual investment returns are lower than anticipated by the assumptions used in the actuarial valuation, this will increase the unfunded liability measurements and require higher contributions in the future than if the actual returns equaled the assumed returns. On the other hand, if the actual returns are higher than the assumptions, the resulting unfunded liability measurements and actuarially determined contributions will be lower than anticipated. As seen in the historical section, this has been a significant driver of deviations in the actual measurements from those expected by the valuations.

*Longevity and Other Demographic Risk* is the potential for mortality or other demographic experience to be different than expected. Generally, longevity and other demographic risks emerge slowly over time as the actual experience deviates from expected and is typically periodically reduced through the Plan's regular actuarial experience process. As such, these risks are often dwarfed by other risks, particularly those due to the investment returns. However, for small plans like this, there are relatively few members and so the behavior of individual members can have a significant impact on the liabilities. In addition, this plan is relatively young and so there has been limited information on which to develop the demographic assumptions, which has contributed to this risk. The historical section shows that this has been true for this plan historically, with the magnitude of the gains and losses from liability experience being of even greater magnitude than those from investment experience.



## SECTION II – RISK DISCLOSURE

*Assumption Change Risk* is the potential for the environment to change such that future valuation assumptions are adjusted to be different than the current assumptions. Causes of these changes include capital market changes resulting in changes in the assumed rates of return, changes in employee behavior and/or plan provisions requiring changes in the demographic assumptions, and similar changes. Assumption change risk is an extension of the risks previously identified, but rather than capturing the risk as it is experienced, it captures the cost of recognizing a change in environment resulting in the current assumption no longer being reasonable. The historical review earlier in this section showed that assumption change risk has been a relatively significant risk for this plan over the recent historical period.

The revisions to the assumed rate of return from 8.0% to 7.5% in 2011, from 7.5% to 7.2% in 2014, and from 7.2% to 7.0% in 2017 constitute the majority of the increases to the unfunded measurements from the expected values as a result of assumption changes. Changes to the demographic assumptions to reflect mortality improvements have also had a relatively significant impact as have changes in the methodology of the funding policy throughout the years. The remaining changes to assumptions have had relatively insignificant impacts.

It is important to note that these changes simply reflect recognizing changes in the expected values of assumptions. If these revisions had not been made, we would anticipate that these amounts would be gradually recognized in the other risks. If future expectations of assumptions such as interest rates or mortality change further, we anticipate similar amounts will have to be recognized.

### **Plan Maturity Measures**

The future financial condition of a mature pension plan is more sensitive to each of the risks identified in the previous section than in a less mature plan. Before assessing the risks to the Plan from a forward-looking perspective, it is of value to understand the maturity of the Plan compared to other plans as well as how the Plan's maturity has changed over time.

Plan maturity can be measured in a variety of ways, but they all get at one basic dynamic, the larger the plan is compared to the contribution or revenue base that supports it, the more sensitive the plan will be to risk. There are extensive measures available to assess plan maturity. For this plan, we have examined a number of these, and all indicate that the Plan is maturing but is less mature than most of its peers. We have included the most simplistic of these measures as a demonstration of this.

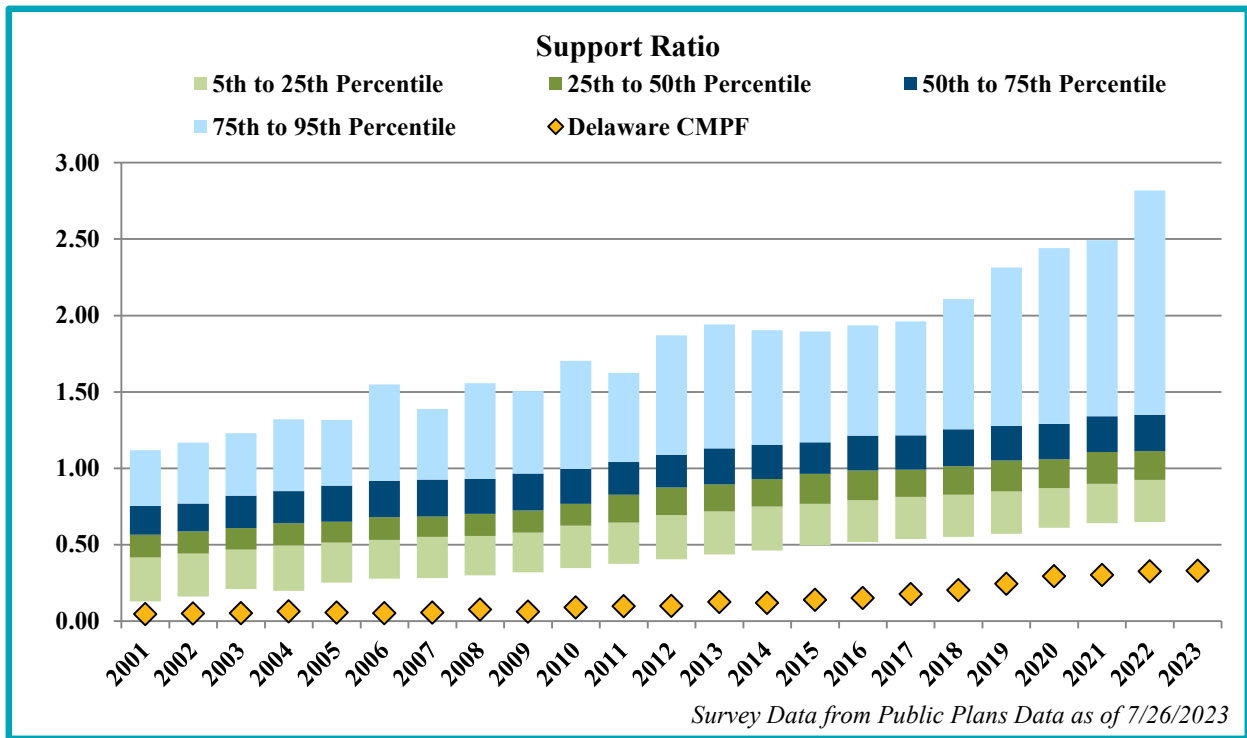
The most simplistic of the Plan maturity measures is the support ratio, which is the ratio of the number of inactive members (those receiving benefits currently or entitled to a deferred benefit) to the number of active members. The following graph shows the support ratio over time for the Plan versus a universe of other public plans.

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**SECTION II – RISK DISCLOSURE**

The Boston College’s Center for Retirement Research, NASRA, and the Center for State and Local Government Excellence maintain the Public Plans Database that contains the majority of state plans as well as many large municipal plans, covering over 95% of the membership in public plans as well as over 95% of the assets held by public pension plans.

The chart that follows shows the support ratio for all plans in this database since 2001. The colored bars represent the central 90% of the support ratios for the plans in the database. The Delaware County & Municipal Police/Firefighters Pension Plan is represented by the gold diamonds. Note that this chart shows one more year for the System than the universe as the 2023 numbers are not yet available for the database.



This graph shows the support ratio for the Plan has generally increased over time. This graph shows that Delaware County & Municipal Police/Firefighters’ support ratio is lower than a typical plan, indicating that the Plan is far less mature based on this metric. As of the most recent dates for which the full database is available, the Delaware County & Municipal Police/Firefighters support ratio continues to be well below the 5<sup>th</sup> percentile among all plans in the database.

## SECTION II – RISK DISCLOSURE

### More Detailed Assessment

A more detailed assessment is always valuable to enhance the understanding of the risks identified above; however, the value of this must be compared alongside the costs of such an exercise. The costs in this case are both measurable costs as expressed by the actuarial fees for the additional assessment and the cost of staff time required to support the effort, and more intangible costs such as the additional information potentially drowning out the principal findings from the valuation and overwhelming decision makers.

Whether or not to have a more detailed risk assessment performed at this time is the Board's decision, but we do not believe that this additional risk assessment is required at this time based on our understanding of the Board's priorities.

### Conclusion

The results of this valuation are based on the assumptions and methodology used within the valuation, and to the extent that actual experience deviates from these, the actual future measurements will deviate from those projected by this valuation. The most significant risks related to this are anticipated to be investment risk, mortality and other demographic risk, and assumption change risk.

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**SECTION III – ASSETS**

Pension plan assets play a key role in the financial operation of the Plan and in the decisions that the Board of Trustees may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely affect benefit levels, employer actuarially determined contributions, and the ultimate security of members’ benefits.

In this section, we present detailed information on the Plan’s assets including:

- **Disclosure** of the Plan’s assets at June 30, 2022 and June 30, 2023,
- Statement of the **changes** in market values during FY 2023,
- Development of the **actuarial value of assets**,
- An assessment of **investment performance**, and
- A projection of the Plan’s expected **cash flows** for the next 10 years.

**Market Value of Assets Disclosure**

The market values of assets represent “snap-shot” or “cash-out” values that provide the principal basis for measuring financial performance from one year to the next. However, market values can fluctuate widely with swings in the marketplace, and as such, are usually not suitable for budgeting and long-range planning.

Table III-1 below shows the market values as of June 30, 2022 and June 30, 2023, along with the changes between the two.

Table III-1 Changes in Market Values of Assets		
<b>Market Value of Assets – June 30, 2022</b>		<b>\$ 548,995,500</b>
<b><u>Additions</u></b>		
Member Contributions	\$ 8,065,400	
Employer Contributions	13,027,200	
Investment Returns	28,098,600	
<b>Total Additions</b>	<b>\$ 49,191,200</b>	
<b><u>Deductions</u></b>		
Benefit Payments	\$ 17,656,400	
Administrative Expenses	182,800	
<b>Total Deductions</b>	<b>\$ 17,839,200</b>	
<b>Market Value of Assets – June 30, 2023</b>		<b>\$ 580,347,500</b>

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
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**SECTION III – ASSETS**

**Actuarial Value of Assets**

The actuarial value of assets represents a “smoothed” value developed by the actuary to reduce, or eliminate, erratic results that could develop from short-term fluctuations in the market value of assets. The actuarial value for this plan equals the expected actuarial value of assets, developed from the immediately prior valuation, plus 20% of the difference between the actual market value of assets and that expected actuarial value of assets at the valuation date. The table below illustrates the calculation of the actuarial value of assets as of June 30, 2023.

<b>Table III-2 Development of Actuarial Value of Assets</b>		
1.	Actuarial Value of Assets at June 30, 2022	\$ 552,836,500
2.	Amount in (1) with interest to June 30, 2023 at 7.0% per year	591,535,100
3.	Employer and member contributions for FY 2023	21,092,600
4.	Interest on contributions assuming payments made uniformly throughout the year to June 30, 2023 at 7.0% per year	725,700
5.	Disbursements from Trust except investment expenses, July 1, 2022 through June 30, 2023	17,839,200
6.	Interest on disbursements to June 30, 2023 at 7.0% per year	<u>613,800</u>
7.	Expected Actuarial Value of Assets at June 30, 2023 = (2) + (3) + (4) – (5) – (6)	\$ 594,900,400
8.	Actual Market Value of Assets at June 30, 2023	<u>\$ 580,347,500</u>
9.	Excess of (8) over (7)	\$ (14,552,900)
10.	Actuarial Value of Assets at June 30, 2023 = (7) + 20% of (9)	\$ 591,989,800

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
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**SECTION III – ASSETS**

**Investment Performance**

The market value of assets (MVA) returned 5.1% during 2023, which is less than the prior year’s assumed 7.0% investment rate of return. The actuarial value of assets (AVA) returned 6.5% over this same year, reflecting the asset smoothing methodology being utilized by the Plan for the measurement of the actuarial value of assets. Since a maximum of 20% of the gain or loss from the performance of the Plan is typically recognized in a given year under the adopted asset smoothing method, in periods of very good performance, the AVA can lag significantly behind the MVA, and in a period of negative returns, the AVA does not decline as rapidly as the MVA.

**Projection of Cash Flows**

<b>Table III-3 Cash Flow Projections</b>		
<b>Year Beginning July 1,</b>	<b>Expected Benefit Payments and Administrative Expenses</b>	<b>Expected Contributions*</b>
2023	\$ 19,694,000	\$ 23,895,000
2024	22,243,000	27,271,000
2025	25,358,000	27,953,000
2026	28,799,000	28,652,000
2027	32,163,000	29,368,000
2028	35,583,000	30,102,000
2029	39,093,000	30,855,000
2030	42,601,000	31,626,000
2031	46,042,000	32,417,000
2032	49,602,000	33,227,000

\* Expected contributions include participating employer contributions and member contributions. For illustration purposes, we have assumed the employer contribution rate will remain at 14.98% from FYE 2025 forward and that payroll will increase at the actuarially assumed rate of 2.50% per year.

Expected benefit payments are projected for the closed group valued at June 30, 2023. Projecting any further than 10 years using a closed group would not yield reliable projections due to the omission of new hires in the benefit payments, compounded by their inclusion in the expected contributions.

## SECTION IV – LIABILITIES

In this section, we present detailed information on the Plan’s liabilities for funding purposes, including:

- **Disclosure** of the Plan’s liabilities at June 30, 2022 and June 30, 2023, and
- Statement of **changes** in these liabilities during the year.

### Disclosure

Three liability measurements are calculated and presented in this report. Each type is distinguished by the purpose, or purposes, for which they are used.

- **Present Value of Benefits (PVB):** Used for analyzing the financial outlook of plans, this represents the amount of money needed today to fund all future benefits and expenses of a plan, assuming current members continue to accrue benefits, there are no new entrants, and that all actuarial assumptions are met.
- **Actuarial Liability (AL):** Used for funding calculations for a plan and GASB disclosures, this liability is calculated by taking the present value of benefits (PVB) and subtracting the present value of future member contributions (PVFEEC) and the present value of future employer normal costs (PVFNC) under an acceptable actuarial funding method. The Plan uses the **Entry Age Normal** funding method.
- **Present Value of Accrued Benefits (PVAB):** Used for communicating the current level of liabilities, this liability represents the total amount of money needed today to fully fund the current accrued obligations of a plan, assuming no future accruals of benefits or salary increases. These liabilities are also required for some accounting purposes of some plans (Topic No. 960). This plan is not subject to this requirement, but this information is provided for informational purposes, as it is sometimes used as part of assessing whether a plan can meet its current benefit commitments. However, it is not intended as a settlement liability value. Note that the development of this amount also assumes that all actuarial assumptions are met, including the assets earning 7.0% per year.

None of the liability amounts disclosed in this report is appropriate for measuring a settlement of the Plan’s liabilities.

The following table discloses each of these liabilities for the current and immediately prior funding valuations. With respect to each disclosure, a subtraction of an appropriate value of plan assets yields, for each respective type, either a net surplus or an unfunded amount.

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
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**SECTION IV – LIABILITIES**

**Table IV-1  
Liabilities and Net (Surplus)/Unfunded Amount**

	<b>June 30, 2022</b>	<b>June 30, 2023</b>
<b><u>Present Value of Benefits</u></b>		
Active Member Benefits	\$ 532,410,900	\$ 590,832,800
Retiree, Beneficiary, Disabled, and Terminated Members Benefits	<u>196,606,800</u>	<u>223,485,500</u>
<b>Present Value of Benefits (PVB)</b>	<b>\$ 729,017,700</b>	<b>\$ 814,318,300</b>
Market Value of Assets (MVA)	\$ 548,995,500	\$ 580,347,500
Future Member Contributions	63,348,400	72,094,300
Future Employer Contributions	<u>116,673,800</u>	<u>161,876,500</u>
<b>Total Resources</b>	<b>\$ 729,017,700</b>	<b>\$ 814,318,300</b>
<b><u>Actuarial Liability</u></b>		
Present Value of Benefits (PVB)	\$ 729,017,700	\$ 814,318,300
Present Value of Future Employer Normal Costs (PVFNC)	113,843,600	130,415,500
Present Value of Future Member Contributions (PVFEEC)	<u>63,348,400</u>	<u>72,094,300</u>
<b>Actuarial Liability (AL=PVB–PVFNC–PVFEEC)</b>	<b>\$ 551,825,700</b>	<b>\$ 611,808,500</b>
Actuarial Value of Assets (AVA)	<u>552,836,500</u>	<u>591,989,800</u>
<b>Net (Surplus)/Unfunded (AL – AVA)</b>	<b>\$ (1,010,800)</b>	<b>\$ 19,818,700</b>
<b><u>Present Value of Accrued Benefits</u></b>		
Present Value of Benefits (PVB)	\$ 729,017,700	\$ 814,318,300
Present Value of Future Benefit Accruals (PVFBA)	<u>277,618,600</u>	<u>310,550,600</u>
<b>Present Value of Accrued Benefits (PVAB=PVB–PVFBA)</b>	<b>\$ 451,399,100</b>	<b>\$ 503,767,700</b>
Market Value of Assets (MVA)	\$ 548,995,500	\$ 580,347,500
<b>Net (Surplus)/Unfunded PVAB (PVAB – MVA)</b>	<b>\$ (97,596,400)</b>	<b>\$ (76,579,800)</b>



## SECTION IV – LIABILITIES

### Low-Default-Risk Obligation Measure (LDROM)

The System invests in a diversified portfolio with the objective of maximizing investment returns at a reasonable level of risk. The lowest risk portfolio for a pension plan would be composed entirely of low-default-risk fixed income securities whose cash flows match the benefit cash flows of the System. Such a portfolio, however, would have a lower expected rate of return than the diversified portfolio. The LDROM represents what the Present Value of Accrued Benefits Actuarial Liability would be if the System invested its assets in such a portfolio. As of June 30, 2023, we estimate that a portfolio representative of the Financial Times Stock Exchange (FTSE) Pension Liability index would have an expected return of 5.00% rounded to the nearest 0.25%, compared to the System's discount rate of 7.00%, and the LDROM would be \$673 million compared to the Present Value of Accrued Benefits Actuarial Liability of \$504 million. The \$169 million difference represents the expected taxpayer savings from bearing the risk of investing in the diversified portfolio. Alternatively, it also represents the cost of eliminating the investment risk.

If the System were to invest in the LDROM portfolio, the reported funded status would decrease, and contribution requirements would increase. Benefit security for members of the plan relies on a combination of the assets in the System, the investment returns generated on those assets, and the promise of future contributions. If the System were to invest in the LDROM portfolio, it would not change the amount of assets currently in the System, but it would reduce expected future investment returns and increase expected future contributions. However, the range of future investment returns and future contributions needed would narrow significantly.

### Changes in Liabilities

Each of the liabilities disclosed in the prior table are expected to change at each valuation. The components of that change, depending upon which liability is analyzed, can include:

- New entrants since the last valuation
- Benefits accrued since the last valuation
- Plan amendments increasing benefits
- Passage of time which adds interest to the prior liability
- Benefits paid to retirees since the last valuation
- Participants retiring, terminating, or dying at rates different than expected
- A change in actuarial assumptions
- A change in actuarial methods

Unfunded liabilities (or surpluses), developed from subtraction of an appropriate value of Plan assets from these liability measures, will change because of all of the above as well as due to changes in Plan asset measures resulting from:

- Employer contributions different than expected
- Investment earnings different than expected
- A change in the methodology used to measure Plan assets

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
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**SECTION IV – LIABILITIES**

In each valuation, we report on those elements of change that are of particular significance, potentially affecting the long-term financial outlook of the Plan. Below, we present key changes in the liabilities since the last valuation.

<b>Table IV-2 Liability Changes</b>			
	<b>Present Value of Benefits</b>	<b>Actuarial Liability</b>	<b>Present Value of Accrued Benefits</b>
Liabilities June 30, 2022	\$ 729,017,700	\$ 551,825,700	\$ 451,399,100
Liabilities June 30, 2023	814,318,300	611,808,500	503,767,700
Liability Increase/(Decrease)	85,300,600	59,982,800	52,368,600
Change Due to:			
Benefit Changes	0	0	0
Assumption Changes	0	0	0
Actuarial (Gain)/Loss	NC *	17,084,500	NC *
Benefits Accumulated and Other (Gain)/Loss	85,300,600	42,898,300	52,368,600

\* NC = not calculated

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**SECTION IV – LIABILITIES**

Table IV-3 below provides additional information about the liability measurements for funding purposes as of both the current and the immediately prior valuations.

<b>Table IV-3 Actuarial Liabilities for Funding</b>		
	<b>June 30, 2022</b>	<b>June 30, 2023</b>
1. Actuarial Liabilities		
Retiree, Beneficiary, Disabled, and Terminated Members	\$ 196,606,800	\$ 223,485,500
Active Members	<u>355,218,900</u>	<u>388,323,000</u>
<b>Total Actuarial Liability (AL)</b>	<b>\$ 551,825,700</b>	<b>\$ 611,808,500</b>
2. Actuarial Value of Assets (AVA)	\$ 552,836,500	\$ 591,989,800
3. Unfunded Actuarial Liability (UAL) [AL – AVA]	\$ (1,010,800)	\$ 19,818,700
4. Unpaid UAL from Participating Municipalities	<u>\$ 0</u>	<u>\$ 0</u>
<b>5. Net Base for 10-Year UAL Amortization (3-4)</b>	<b>\$ (1,010,800)</b>	<b>\$ 19,818,700</b>

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**SECTION V – CONTRIBUTIONS**

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level, if any, of contributions is needed to properly maintain the funding status of the plan. Typically, the actuarial process will use a funding technique that will result in a pattern of contributions that are both fairly stable and predictable.

For this plan, the funding method employed is the **Entry Age Normal** actuarial funding method. Under this method, there are three components to the total contribution: the **normal cost contribution**, the **unfunded actuarial liability contribution** (UAL contribution), and the **administrative expense contribution**.

The employer normal cost contribution rate is determined in the following steps. First, for each active member an individual total normal cost rate is determined by taking the value, as of entry age into the Plan, of that member’s projected future benefits and dividing it by the value, also at entry age, of the member’s expected future salary. Then, this individual total normal cost rate is reduced by the member’s contribution rate to produce the employer normal cost rate for each member. The employer normal cost rate, times payroll for each active member, equals the employer normal cost. The sum of the employer normal cost amounts for all active members is then divided by the covered payroll for all active members to produce the employer normal cost contribution rate.

The actuarial liability is that portion of the present value of projected benefits that will not be paid by future employer normal cost contributions or future member contributions. The difference between this liability and the funds accumulated as of the same date is referred to as the unfunded actuarial liability (UAL).

The UAL amortization payment rate is calculated by amortizing this UAL, after subtracting payments due from municipalities paying for prior service, over an open 10-year period. All payments are determined assuming total pay increases by the current annual inflation assumption of 2.50%.

The current assumed administrative expense rate is 0.20% of payroll. This rate, when applied to payroll, is intended to provide an allowance above the cost of funding the benefits to pay for the expense of operating the Plan.

The table below presents and compares the employer contribution rates for the Plan based on this funding valuation and the one immediately prior.

<b>Table V-1</b>		
<b>Employer Contribution Rate</b>		
<b>Valuation Date</b>	<b>June 30, 2022</b>	<b>June 30, 2023</b>
<b>FY Contribution Rate Payable</b>	<b>FY 2024</b>	<b>FY 2025</b>
Employer Entry Age Normal Cost Rate	12.66%	12.74%
UAL Amortization Payment Rate	(0.12%)	2.04%
Administrative Expense Rate	<u>0.20%</u>	<u>0.20%</u>
Actuarially Determined Contributions	12.74%	14.98%

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**SECTION V – CONTRIBUTIONS**

Table V-2 below provides additional detail about the development of the actuarially determined contribution rate for participating employers as well as the expected dollar amounts these rates will result in for FY 2025.

<b>Table V-2 Expected FY 2025 Employer Contributions</b>		
	<b>In Dollars</b>	<b>As % of Payroll</b>
1. Present Value of Projected Benefits Attributable to:		
a. Total Normal Cost	\$ 23,895,600	19.75%
b. Expected Member Contributions	<u>8,481,400</u>	<u>7.01%</u>
c. Employer Normal Cost (a) – (b)	\$ 15,414,200	12.74%
2. Amortization of Unfunded Liability	2,468,500	2.04%
3. Allowance for Administrative Expense	<u>242,000</u>	<u>0.20%</u>
4. Total Employer Actuarially Determined Contributions (1) + (2) + (3)	\$ 18,124,700	14.98%

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**SECTION VI – ACCOUNTING STATEMENT INFORMATION**

ASC Topic No. 960 of the Financial Accounting Standards Board (FASB) requires plans subject to it to disclose certain information regarding their funded status. This plan is not subject to this requirement, but this information is provided for informational purposes. Statement No. 67 of the Governmental Accounting Standards Board (GASB) establishes standards for disclosure of pension information by public employee retirement systems (PERS) and governmental employers in notes to financial statements and supplementary information.

Disclosures based on FASB ASC Topic No. 960 provide a quasi “snap-shot” view of how the Plan’s assets compare to its liabilities if contributions stopped and accrued benefit claims had to be satisfied. However, due to potential legal requirements and the possibility that alternative interest rates would have to be used to determine the liabilities, these values may not be a good indication of the amount of money it would take to buy the benefits for all members if the Plan were to terminate and should not be considered a settlement value.

FASB ASC Topic No. 960 specifies that a comparison of the present value of accrued (accumulated) benefits, with the market value of the assets as of the valuation date, must be provided. Again, this plan is not subject to this requirement, but the relevant amounts as of June 30, 2022 and June 30, 2023 are provided for informational purposes and are exhibited in Table VI-1, which also includes a reconciliation of liabilities determined as of the prior valuation, July 1, 2022, to the liabilities as of June 30, 2023. These values are based on the funding liability results.

This valuation contains information reported in the June 30, 2023 Annual Comprehensive Financial Report (ACFR) of Delaware PERS under GASB Statement No. 67. Disclosures are based on the use of updated procedures to roll forward the 2022 funding valuation results. The calculation of Net Pension Liability in Table VI-2 shows the amounts to be disclosed for FY 2023, based on the liabilities of the roll forward of the 2022 funding valuation, as well as a projection of the anticipated FY 2024 disclosures, based on liabilities from the 2023 funding valuation, assuming all actuarial assumptions are met over the coming year. The actual disclosures for FY 2024 will be developed once the asset measure for GASB as of June 30, 2024 is known.

Tables VI-3 through VI-5 are exhibits to be used for the System’s ACFR. Table VI-3 is the Note to Required Supplementary Information, Table VI-4 is a history of gains and losses in accrued liability, and Table VI-5 is the Schedule of Funded Liabilities by Type, which shows the portion of accrued liability covered by the actuarial value of assets. The Government Finance Officers Association (GFOA) has named this exhibit the Schedule of Funded Liabilities by Type. None of the liabilities or assets shown is appropriate for settlement purposes. Furthermore, the Schedule of Funded Liabilities by Type does not accurately depict a plan’s future financial condition but rather is a test developed by the GFOA to assess the level of funding that relies on the payroll for future hires to pay for the benefits that have already been accrued by the current population. This valuation does not contain the additional disclosures required by GASB Statement No. 68, only for the plan sponsor’s ACFR.

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**SECTION VI – ACCOUNTING STATEMENT INFORMATION**

**Table VI-1  
Accounting Statement Disclosure and  
Reconciliation of Present Value of Accrued Benefits**

	<b>June 30, 2022</b>	<b>June 30, 2023</b>
<b>FASB ASC Topic No. 960 Basis</b>		
1. Present Value of Accrued Benefits (PVAB)		
a. Members Currently Receiving Payments	\$ 191,629,500	\$ 216,792,600
b. Former Vested Members	4,977,300	6,692,900
c. Active Members	<u>254,792,300</u>	<u>280,282,200</u>
2. Total PVAB [1(a) + 1(b) + 1(c)]	\$ 451,399,100	\$ 503,767,700
3. Market Value of Assets (MVA)	<u>548,995,500</u>	<u>580,347,500</u>
4. Unfunded PVAB [2 – 3]	\$ (97,596,400)	\$ (76,579,800)
5. Ratio of MVA to PVAB [3 / 2]	121.6%	115.2%
<b>Reconciliation of PVAB</b>		
PVAB at June 30, 2022		\$ 451,399,100
Increase/(Decrease) During Years Attributable to:		
Passage of Time		30,990,400
Benefits Paid – FY 2023		(17,656,400)
Benefit Changes		1,613,986
Assumption Changes		0
Benefits Accrued, Other Gains/Losses		<u>37,420,614</u>
Net Increase/(Decrease)		52,368,600
PVAB at June 30, 2023		\$ 503,767,700

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**SECTION VI – ACCOUNTING STATEMENT INFORMATION**

**Table VI-2  
GASB No. 67 Disclosures**

	<b>June 30, 2023</b>	<b>Estimated June 30, 2024</b>
<b><u>Total Pension Liability (TPL)</u></b>		
Service cost	\$ 21,060,000	\$ 23,890,000
Interest	39,494,000	43,829,000
Changes in benefit terms	0	0
Differences between expected and actual experience	13,344,000	17,085,000
Changes in assumptions	0	0
Benefit payments, including refunds of member contributions	(17,656,000)	(19,452,000)
<b>Net change in TPL</b>	<b>\$ 56,242,000</b>	<b>\$ 65,352,000</b>
<b>TPL - beginning</b>	<b>\$ 538,482,000</b>	<b>\$ 594,724,000</b>
<b>TPL - ending (a)</b>	<b>\$ 594,724,000</b>	<b>\$ 660,076,000</b>
<b><u>Fiduciary Net Position<sup>1</sup>(FNP)</u></b>		
Contributions - Employer	\$ 13,027,000	\$ 15,414,000
Contributions - Non-employer	0	0
Contributions – Member	8,065,000	8,481,000
Net investment income	28,099,000	40,769,000
Benefit payments, including refunds of member contributions	(17,656,000)	(19,452,000)
Administrative expenses	(183,000)	(242,000)
<b>Net change in FNP</b>	<b>\$ 31,352,000</b>	<b>\$ 44,970,000</b>
<b>FNP – beginning</b>	<b>\$ 548,996,000</b>	<b>\$ 580,348,000</b>
<b>FNP - ending (b)</b>	<b>\$ 580,348,000</b>	<b>\$ 625,318,000</b>
<b>Net Pension Liability/(Asset) - ending [(a)-(b)]</b>	<b>\$ 14,376,000</b>	<b>\$ 34,758,000</b>

Items printed in red will be replaced with actual amounts once known at the end of FY 2024.



**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**SECTION VI – ACCOUNTING STATEMENT INFORMATION**

**Table VI-3  
Note to Required Supplementary Information**

The June 30, 2023 total pension liability presented in Table VI-2 was determined as part of the measurement at the date indicated. Additional information as of the latest measurement date follows.

Measurement date:	July 1, 2023
Valuation date:	July 1, 2022
Actuarial cost method	Entry age normal
Actuarial assumptions:	
Investment rate of return*	7.0%
Projected salary increases*	2.5% plus merit component based on service
Cost-of-living adjustments	ad hoc
* Includes inflation at	2.50%

The actuarially determined contribution for fiscal year 2025 will use the contribution rate developed in section V of this valuation. It was determined using the measurement date and key assumptions that follow.

Measurement date:	July 1, 2023
Valuation date:	July 1, 2023
Actuarial cost method:	Entry age normal
Amortization method:	Percentage of pay – open Pay increases at 2.5% per year
Amortization period:	10 years
Asset valuation method:	Smoothed market, 20% annual market weight
Actuarial assumptions:	
Investment rate of return*	7.0%
Projected salary increases*	2.5% plus merit component based on service
Cost-of-living adjustments	ad hoc
* Includes inflation at	2.50%

The actuarial assumptions used have been recommended by the actuary and adopted by the Plan’s Board of Trustees based on the most recent review of the Plan’s experience completed in 2021. The economic assumptions were updated first effective with the 2017 valuation based on the Board’s annual review of these assumptions.

The total rate of State contributions to the Plan is composed of the employer normal cost rate, the unfunded actuarial liability amortization payment rate, and the administrative expenses rate. The employer normal cost rate is a level percent of payroll cost that, along with member contributions, will pay for projected benefits at retirement for each active member. The actuarial liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or future member contributions. The difference between this liability and the funds accumulated as of the same date is the unfunded actuarial liability. The allowance for administrative expenses is based upon the Plan’s actual administrative expenses.

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**SECTION VI – ACCOUNTING STATEMENT INFORMATION**

**Table VI-4  
Analysis of Financial Experience  
Gain and Loss in Accrued Liability during Years Ended June 30  
Resulting from Differences between Assumed Experience and Actual Experience**

Type of Activity	<i>Gain (or Loss) for Year Ending June 30, (expressed in thousands)</i>					
	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Investment Income on Actuarial Assets	\$ (1,430)	\$ (780)	\$ 1,619	\$ 29,163	\$ (960)	\$ (2,911)
Combined Liability Experience	<u>(19,690)</u>	<u>47</u>	<u>1,508</u>	<u>(8,025)</u>	<u>(13,344)</u>	<u>(17,085)</u>
(Loss)/Gain during Year from Financial Experience	\$ (21,120)	\$ (733)	\$ 3,127	\$ 21,138	\$ (14,304)	\$ (19,996)
Non-Recurring Items	<u>(9,457)</u>	<u>(123)</u>	<u>(869)</u>	<u>10,299</u>	<u>(1,614)</u>	<u>0</u>
Composite Gain (or Loss) during Year	\$ (30,577)	\$ (856)	\$ 2,258	\$ 31,437	\$ (15,918)	\$ (19,996)

**Table VI-5  
Schedule of Funded Liabilities by Type  
Aggregate Accrued Liabilities for  
(expressed in thousands)**

Valuation Date June 30,	Active Member Contributions (1)	Retirees & Beneficiaries (2)	Active Member State-Financed Contributions (3)	Actuarial Value of Reported Assets	Portion of Accrued Liabilities Covered by Reported Assets		
					(1)	(2)	(3)
2023	\$ 91,933	\$ 216,793	\$ 303,083	\$ 591,990	100%	100%	93%
2022	86,834	191,630	273,362	552,837	100	100	100
2021	81,373	169,216	246,377	509,141	100	100	105
2020	75,029	149,302	236,782	439,907	100	100	91
2019	70,680	126,893	227,931	399,949	100	100	89
2018	67,901	102,111	219,486	363,497	100	100	88

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**APPENDIX A – MEMBERSHIP INFORMATION**

Delaware County & Municipal Police/Firefighters Pension Plan Data Reconciliation										
	A	P-TDV	P-SUPP	P-RET	P-DIS	P-NSR	P-SR	P-SRSU	P-SURV	Total
1. June 30, 2022 valuation	1,343	61	3	300	0	15	37	6	14	1,779
2. Additions										
(a) New entrants	202	2		1						205
(b) <u>New Beneficiary/QDRO</u>										
(c) Total	202	2		1						205
3. Reductions										
(a) Terminated - not vested	(55)									(55)
(b) <u>Paid Out/Expired/Death</u>		(2)							(1)	(3)
(c) Total	(55)	(2)							(1)	(58)
4. Changes in status										
(a) P-TDV	(6)	6								
(b) P-SUPP										
(c) Returned to work	1	(1)								
(d) P-RET	(32)	(3)		35						
(e) PRET25										
(f) P-NSR	(1)					1				
(g) P-DIS										
(h) P-SURV										
(i) PSUR25										
(j) P-SR	(3)						3			
(k) <u>Data corrections</u>										
(l) Total	(41)	2		35		1	3			
5. June 30, 2023 valuation	1,449	63	3	336	0	16	40	6	13	1,926

A=Active, P-TDV=Terminated Deferred Vested, P-SUPP=Terminated Deferred Vested, P-RET=Retired, P-DIS=Disabled, P-NSR=Disabled, P-SR=Disabled, P-SURU=Surviving Beneficiary, PSUR25=Surviving Beneficiary

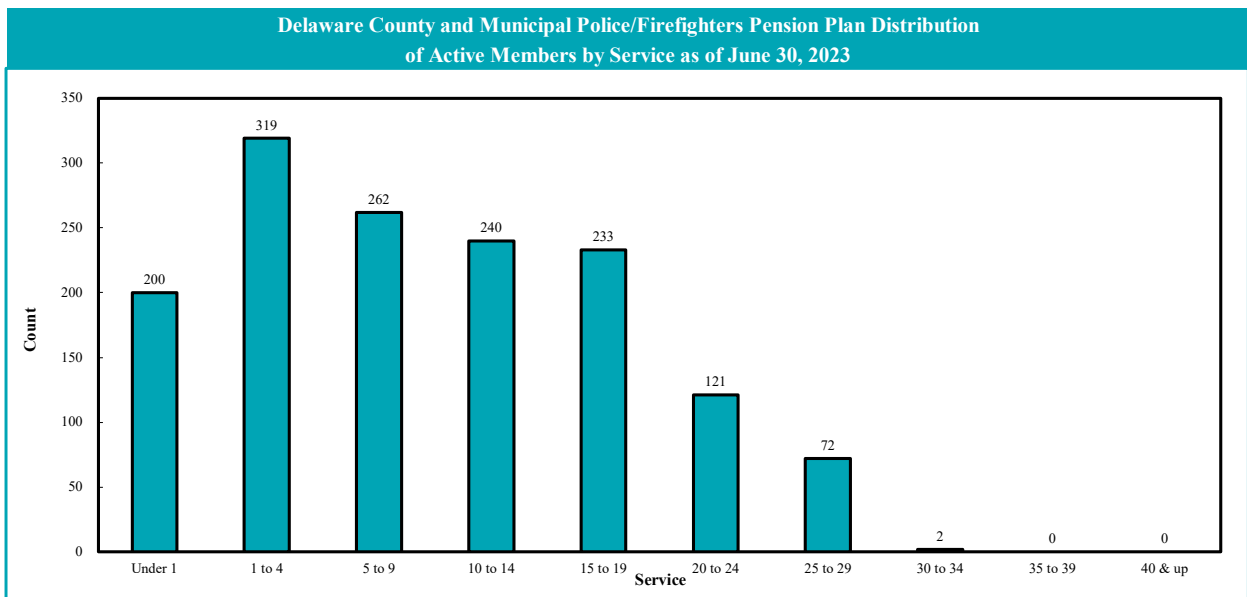
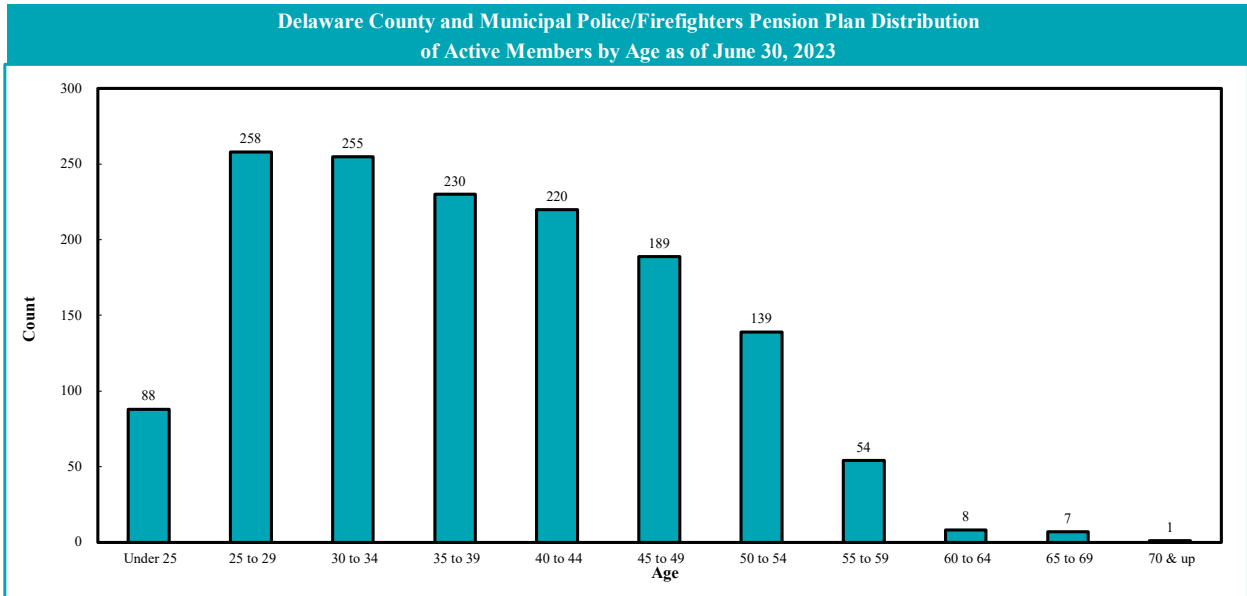
**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**APPENDIX A – MEMBERSHIP INFORMATION**

<b>Delaware County and Municipal Police/Firefighters Pension Plan Distribution of Active Members by Age and Service as of June 30, 2023</b>											
<b>Counts By Age/Service</b>											
<b>Age</b>	<b>Service</b>										<b>Total</b>
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	45	43	0	0	0	0	0	0	0	0	88
25 to 29	48	162	48	0	0	0	0	0	0	0	258
30 to 34	34	76	108	37	0	0	0	0	0	0	255
35 to 39	23	24	60	96	27	0	0	0	0	0	230
40 to 44	11	11	22	61	102	13	0	0	0	0	220
45 to 49	13	1	12	27	60	62	14	0	0	0	189
50 to 54	8	0	6	13	35	37	39	1	0	0	139
55 to 59	9	2	2	5	8	9	18	1	0	0	54
60 to 64	4	0	2	0	1	0	1	0	0	0	8
65 to 69	4	0	2	1	0	0	0	0	0	0	7
70 & up	1	0	0	0	0	0	0	0	0	0	1
<b>Total</b>	<b>200</b>	<b>319</b>	<b>262</b>	<b>240</b>	<b>233</b>	<b>121</b>	<b>72</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1,449</b>

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**APPENDIX A – MEMBERSHIP INFORMATION**



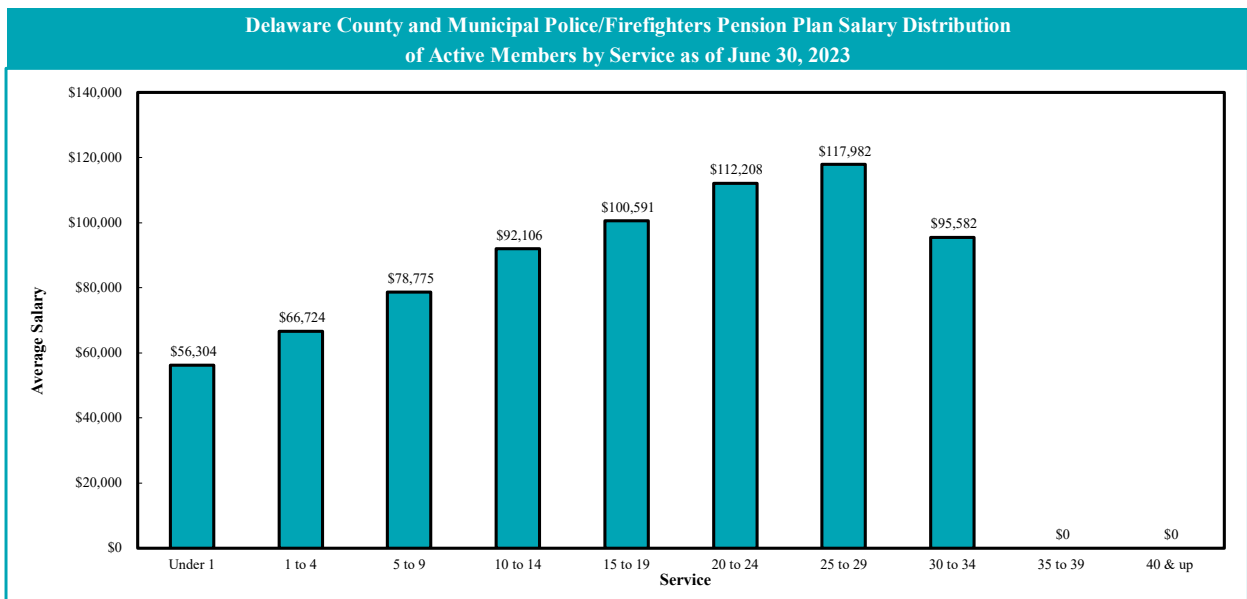
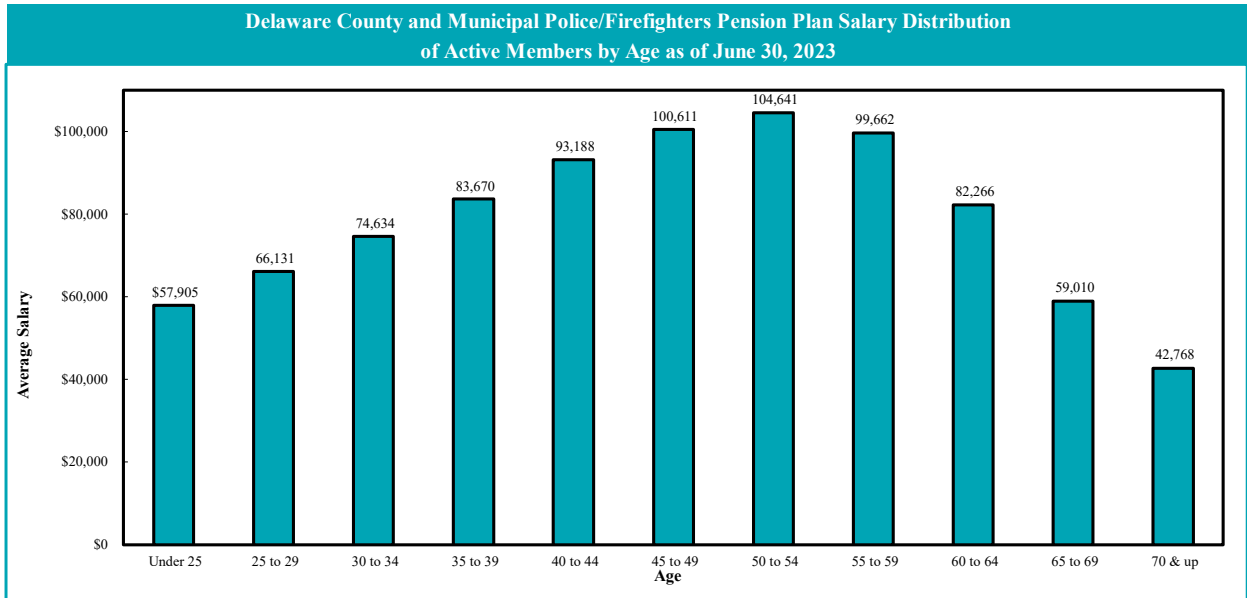
**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**APPENDIX A – MEMBERSHIP INFORMATION**

<b>Delaware County and Municipal Police/Firefighters Pension Plan Salary Distribution of Active Members by Age and Service as of June 30, 2023</b>												
<b>Average Salary by Age/Service</b>												
<b>Age</b>	<b>Service</b>										<b>Total</b>	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up		
Under 25	\$ 52,393	\$ 63,673	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 57,905
25 to 29	54,604	66,692	75,763	0	0	0	0	0	0	0	0	66,131
30 to 34	56,760	66,787	79,212	93,816	0	0	0	0	0	0	0	74,634
35 to 39	55,203	64,413	80,504	94,132	94,873	0	0	0	0	0	0	83,670
40 to 44	60,959	67,583	80,613	89,860	101,716	112,107	0	0	0	0	0	93,188
45 to 49	63,936	64,239	74,117	93,586	101,151	112,959	116,517	0	0	0	0	100,611
50 to 54	59,197	0	67,429	84,703	102,317	109,851	123,730	94,739	0	0	0	104,641
55 to 59	66,964	156,772	115,204	81,046	93,989	116,870	107,206	96,424	0	0	0	99,662
60 to 64	71,589	0	82,276	0	98,925	0	108,296	0	0	0	0	82,266
65 to 69	43,857	0	77,409	82,826	0	0	0	0	0	0	0	59,010
70 & up	42,768	0	0	0	0	0	0	0	0	0	0	42,768
<b>Total</b>	<b>\$ 56,304</b>	<b>\$ 66,724</b>	<b>\$ 78,775</b>	<b>\$ 92,106</b>	<b>\$ 100,591</b>	<b>\$ 112,208</b>	<b>\$ 117,982</b>	<b>\$ 95,582</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 83,499</b>

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIIGHTERS PENSION PLAN  
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**APPENDIX A – MEMBERSHIP INFORMATION**



**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**APPENDIX A – MEMBERSHIP INFORMATION**

**Delaware County and Municipal Police/Firefighters Pension Plan Annual Benefit Distribution  
of Retired Members, Survivors, and Disabled Members as of June 30, 2023**

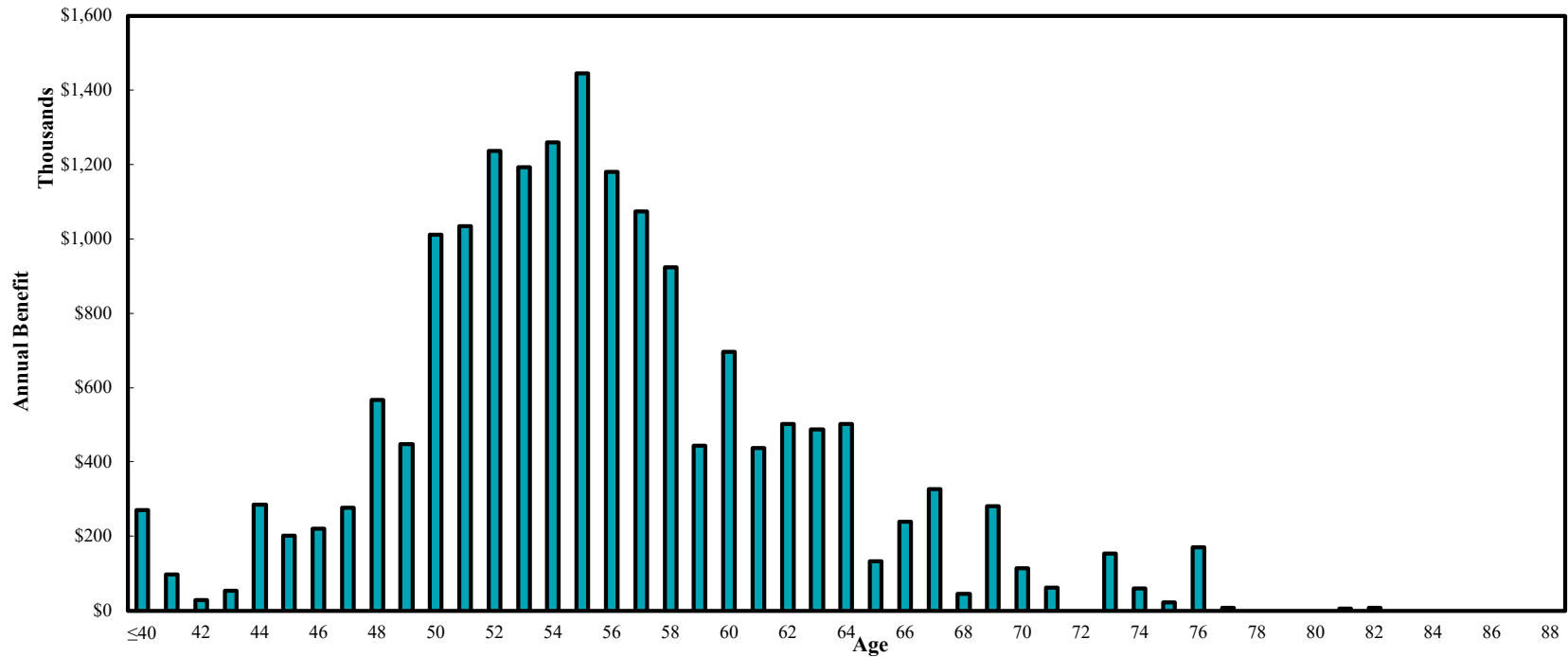
Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	6	\$150,917	73	3	\$154,471
25	0	\$0	74	3	\$60,212
26	0	\$0	75	2	\$21,786
27	0	\$0	76	4	\$169,701
28	0	\$0	77	1	\$7,871
29	0	\$0	78	0	\$0
30	0	\$0	79	0	\$0
31	0	\$0	80	0	\$0
32	0	\$0	81	1	\$5,601
33	1	\$19,449	82	1	\$8,347
34	0	\$0	83	0	\$0
35	0	\$0	84	0	\$0
36	0	\$0	85	0	\$0
37	3	\$65,904	86	0	\$0
38	0	\$0	87	0	\$0
39	0	\$0	88	0	\$0
40	1	\$34,767	89	0	\$0
41	2	\$96,773	90	0	\$0
42	1	\$28,780	91	0	\$0
43	1	\$53,028	92	0	\$0
44	7	\$285,932	93	0	\$0
45	5	\$200,989	94	0	\$0
46	6	\$220,727	95	0	\$0
47	7	\$277,891	96	0	\$0
48	14	\$566,621	97	0	\$0
49	11	\$447,591	98	0	\$0
50	22	\$1,010,276	99	0	\$0
51	22	\$1,033,495	100	0	\$0
52	29	\$1,235,947	101	0	\$0
53	23	\$1,192,876	102	0	\$0
54	25	\$1,259,037	103	0	\$0
55	34	\$1,445,981	104	0	\$0
56	27	\$1,179,696	105	0	\$0
57	20	\$1,073,842	106	0	\$0
58	22	\$923,747	107	0	\$0
59	9	\$443,912	108	0	\$0
60	16	\$697,087	109	0	\$0
61	11	\$436,574	110	0	\$0
62	12	\$501,894	111	0	\$0
63	12	\$487,419	112	0	\$0
64	9	\$501,656	113	0	\$0
65	5	\$132,114	114	0	\$0
66	6	\$239,867	115	0	\$0
67	7	\$326,544	116	0	\$0
68	1	\$45,426	117	0	\$0
69	9	\$281,003	118	0	\$0
70	6	\$113,520	119	0	\$0
71	4	\$62,265	120	0	\$0
72	0	\$0			
			<b>Totals</b>	<b>411</b>	<b>\$17,501,539</b>



**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**APPENDIX A – MEMBERSHIP INFORMATION**

**Delaware County and Municipal Police/Firefighters Pension Plan Annual Benefit Distribution  
of Retired Members, Survivors, and Disabled Members as of June 30, 2023**



**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**APPENDIX A – MEMBERSHIP INFORMATION**

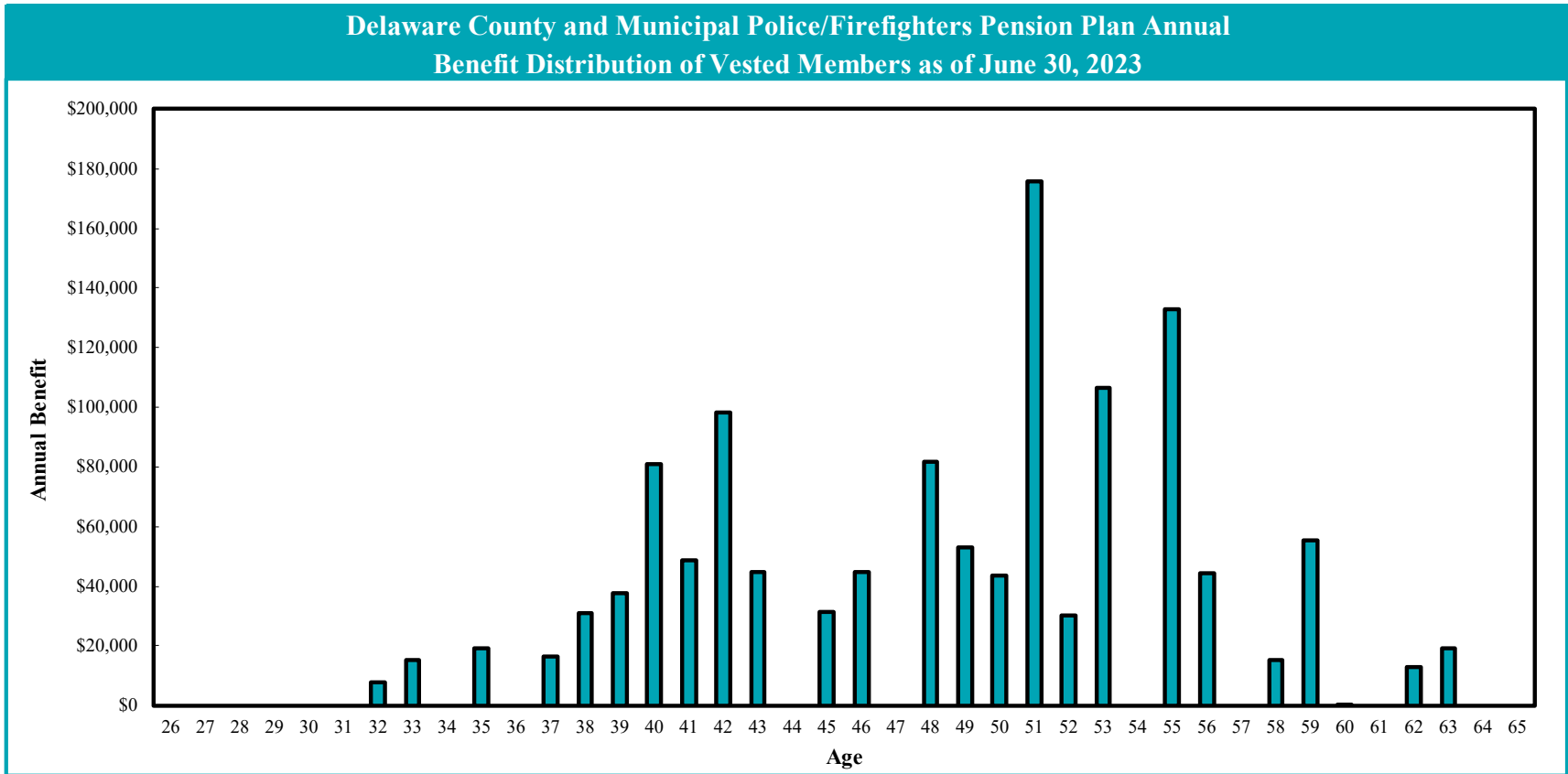
**Delaware County and Municipal Police/Firefighters Pension Plan Annual  
Benefit Distribution of Vested Members as of June 30, 2023**

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	0	\$0	73	0	\$0
25	0	\$0	74	0	\$0
26	0	\$0	75	0	\$0
27	0	\$0	76	0	\$0
28	0	\$0	77	0	\$0
29	0	\$0	78	0	\$0
30	0	\$0	79	0	\$0
31	0	\$0	80	0	\$0
32	1	\$7,754	81	0	\$0
33	3	\$15,419	82	0	\$0
34	0	\$0	83	0	\$0
35	1	\$19,310	84	0	\$0
36	0	\$0	85	0	\$0
37	1	\$16,334	86	0	\$0
38	2	\$30,848	87	0	\$0
39	3	\$37,727	88	0	\$0
40	5	\$80,947	89	0	\$0
41	4	\$48,589	90	0	\$0
42	5	\$98,308	91	0	\$0
43	2	\$44,782	92	0	\$0
44	0	\$0	93	0	\$0
45	1	\$31,349	94	0	\$0
46	3	\$44,874	95	0	\$0
47	0	\$0	96	0	\$0
48	4	\$81,783	97	0	\$0
49	3	\$53,202	98	0	\$0
50	3	\$43,768	99	0	\$0
51	4	\$175,930	100	0	\$0
52	4	\$30,034	101	0	\$0
53	5	\$106,382	102	0	\$0
54	0	\$0	103	0	\$0
55	2	\$132,712	104	0	\$0
56	3	\$44,226	105	0	\$0
57	0	\$0	106	0	\$0
58	1	\$15,231	107	0	\$0
59	3	\$55,501	108	0	\$0
60	1	\$187	109	0	\$0
61	0	\$0	110	0	\$0
62	1	\$12,830	111	0	\$0
63	1	\$19,154	112	0	\$0
64	0	\$0	113	0	\$0
65	0	\$0	114	0	\$0
66	0	\$0	115	0	\$0
67	0	\$0	116	0	\$0
68	0	\$0	117	0	\$0
69	0	\$0	118	0	\$0
70	0	\$0	119	0	\$0
71	0	\$0	120	0	\$0
72	0	\$0			
			Totals	66	\$1,247,181

Amounts shown are those payable once the participant reaches retirement eligibility.

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**APPENDIX A – MEMBERSHIP INFORMATION**



Amounts shown are those payable once the participant reaches retirement eligibility.

**APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS**

**A. Long-Term Assumptions Used to Determine Plan Costs and Liabilities**

**1. Demographic Assumptions**

**a. Rates of Mortality**

Mortality rates are based on the sex-distinct employee, healthy annuitant, and disabled annuitant mortality tables described below, including adjustment factors applied to the published tables for each group. Future mortality improvements are reflected by applying a custom projection scale on a generational basis to adjusted base tables from the base year shown below.

**i. Sample Rates of Mortality for Active Healthy Lives at Selected Ages (number of deaths per 10,000 members):**

(2023 Values Shown)		
Age	Male	Female
25	3	1
30	5	2
35	7	3
40	9	4
45	10	5
50	14	8
55	21	13
60	33	20
65	47	28
70	65	43
75	98	72
80	156	123

Rates are based on 100% of the Pub-2010 General Employee Mortality Table, for males and females, using the Pub-2010 General Benefits Weighted Healthy Annuitant Mortality Table rates after the end of the Employee Mortality Table, both projected from the 2010 base rates using the RPEC-2020 model, with an ultimate rate of 0.85% for ages 20-80, grading down to an ultimate rate of 0% for ages 114-120, and convergence to the ultimate rate in the year 2027. The valuation uses a fully generational projection of mortality improvements. Sample rates shown are those projected through the valuation date.

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS**

**ii. Sample Rates of Mortality for Healthy Annuitant Lives at Selected Ages  
(number of deaths per 10,000 members):**

<b>(2023 Values Shown)</b>		
<b>Age</b>	<b>Male</b>	<b>Female</b>
50	30	21
55	44	29
60	68	40
65	98	58
70	151	94
75	255	167
80	461	311
85	850	591
90	1,482	1,107
95	2,314	1,808
100	3,331	2,724

Rates are based on 107% and 100% of the Pub-2010 General Benefits Weighted Healthy Annuitant Mortality Table, respectively, for males and females, using the Pub-2010 General Employee Mortality Table for ages prior to start of the Healthy Annuitant Mortality Table, both projected from the 2010 base rates using the RPEC-2020 model, with an ultimate rate of 0.85% for ages 20-80, grading down to an ultimate rate of 0% for ages 114-120, and convergence to the ultimate rate in the year 2027. The valuation uses a fully generational projection of mortality improvements. Sample rates shown are those projected through the valuation date.

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS**

**iii. Sample Rates of Mortality for Disabled Annuitant Lives at Selected Ages  
(number of deaths per 10,000 members):**

<b>(2023 Values Shown)</b>		
<b>Age</b>	<b>Male</b>	<b>Female</b>
25	36	22
30	54	38
35	74	59
40	91	79
45	113	102
50	160	147
55	218	188
60	277	218
65	328	228
70	386	268
75	496	377
80	710	588
85	1,071	942
90	1,642	1,396
95	2,387	1,965
100	3,331	2,887

Rates are based on 107% and 106% of the Pub-2010 General Benefits Weighted Disabled Annuitant Mortality Table, respectively, for males and females, projected from the 2010 base rates using the RPEC-2020 model, with an ultimate rate of 0.85% for ages 20-80, grading down to an ultimate rate of 0% for ages 114-120, and convergence to the ultimate rate in the year 2027. The valuation uses a fully generational projection of mortality improvements. Sample rates shown are those projected through the valuation date.

**b. Sample Rates of Active Disability**

<b>Rates of Active Disability</b>	
<b>Age</b>	<b>Rate</b>
20	0.0170%
25	0.0170
30	0.0170
35	0.3400
40	0.4400
45	0.6200
50	1.0000
55	1.8000

No disability is assumed once member reaches retirement eligibility or age 56. 1/3 of disabilities are assumed to be partial and 2/3 are assumed to be total. 1/3 of disabilities are assumed to be duty-related and 2/3 are assumed to be non-duty related.

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS**

**c. Termination of Employment Rates (Prior to Retirement Eligibility)**

Service	Rate
0	7.50%
1 - 5	6.00
6 - 9	3.00
10 - 12	2.00
13 - 18	1.50
19	0.50
20+	0.00

\* Termination rates are zero once a member has reached retirement eligibility, regardless of service.

**d. Rates of Retirement**

Normal Retirement: one-year Select & Ultimate rates upon attaining the earliest of:

- i. Completion of 20 years of credited service, or
- ii. Attainment of age 62 with 10 years of credited service, or
- iii. When age plus service equals or exceeds 75 with a minimum of 10 years of credited service.

Age	Retirement Select	Ultimate
<37	18.00%	0.00%
37-49	18.00	11.00
50-54	18.00	14.00
55-59	18.00	35.00
60-69	18.00	50.00
70+	18.00	100.00

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS**

**e. Salary Increase Rates**

Service-based table includes an annual inflation rate of 2.50%.

Service	Increase
0	9.47%
1	8.44
2	8.14
3	7.11
4	6.50
5	6.09
6	5.58
7	5.27
8	4.91
9	4.55
10	4.24
11	3.94
12	3.73
13	3.63
14	3.53
15	3.42
16	3.32
17	3.22
18	3.12
19	3.01
20	2.91
21	2.81
22	2.71
23+	2.50

**f. Family Composition**

Female spouses are assumed to be three years younger than males. 80% are assumed married for both male and female employees. Actual marital characteristics are used for pensioners.

**2. Economic Assumptions**

- a. Investment Rate of Return: 7.00%
- b. General Wage Increase Rate: 2.50%
- c. Annual Assumed Cost-of-Living Increase Rate for Retirees: 0.00%
- d. Total Payroll Increase Rate (for Amortization): 2.50%
- e. Administrative Expenses as a Percentage of Covered Payroll: 0.20%



**APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS**

**3. Technical and Miscellaneous Assumptions**

- a. Decrement timing: Middle of year
- b. Assume 100% of active deaths are not duty-connected

**4. Disclosures regarding Models Used**

In accordance with Actuarial Standard of Practice (ASOP) No. 56 *Modeling*, the following disclosures are made:

a. Valuation Software

Cheiron utilizes ProVal, an actuarial valuation software program leased from Winklevoss Technologies (WinTech), to calculate liabilities and projected benefit payments. We have reviewed the underlying workings of this model to the degree feasible and consistent with ASOP No. 56 and believe them to be appropriate for the purposes of the valuation.

b. Projections

This valuation report includes projections of future contributions and funded status for the purpose of assisting the Board of Trustees and the sponsors of the Plan with the management of the Plan.

The projections are based on the same census data and financial information as of June 30, 2023 as disclosed in this actuarial valuation. The projections assume continuation of the Plan provisions and actuarial assumptions in effect as of June 30, 2023 and do not reflect the impact of any changes in benefits or actuarial assumptions that may be adopted after June 30, 2023.

The projections assume that all future assumptions are met except where specifically indicated. The future outcomes become increasingly uncertain over time, and therefore the general trends and not the absolute values should be considered in the review of these projections. Further, for the purpose of these projections, we have only reflected the impact of new entrants entering the Plan in aggregate and have not developed individual liabilities or detailed profiles related to these potential new entrants. We feel this is appropriate for the purpose of these projections, but if they were to be used for other purposes, this may not be appropriate and alternative projections may need to be developed.

**5. Rationale for Assumptions**

The assumptions were adopted by the Board of Trustees upon the recommendation of the actuary, based on an experience study review performed in 2021 and covering the period July 1, 2015 through June 30, 2020. The Board continually reviews the investment rate of return assumption and adopted a reduced rate of 7.0% at the advice of its investment consultants, first effective for funding with the 2017 valuation. We find the investment return assumption to be reasonable based on the System's current asset allocation and the capital market outlook of the Delaware Office of the State Treasurer and Cash Management Policy Board.

**APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS**

**6. Disclosure for Reasonable Actuarially Determined Contribution Method (ADC)**

The rate determined in this valuation meets the requirements of a reasonable ADC as defined by the Actuarial Standards of Practice. The actuarial methods used to determine the reasonable ADC have been selected to balance benefit security, intergenerational equity, and stability of contributions. The selection of the actuarial methods has taken into account the demographics of plan members, the funding goals and objectives of the Board, and the need to accumulate assets to make benefit payments when due.

**7. Changes and Rationale Since Last Valuation**

None

## APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

### B. Actuarial Methods

#### 1. Funding Method

The Entry Age Normal funding method is used to determine costs. Under this funding method, a normal cost rate is determined as a level percent of pay for each active member. The normal cost rate times payroll equals the normal cost for each active member. The normal cost plus member contributions will pay for projected benefits at retirement for each active plan participant.

The actuarial liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and funds accumulated as of the same date is referred to as the unfunded actuarial liability.

The portion of the actuarial liability in excess of Plan assets is amortized to develop an additional cost or savings that is added to each year's employer normal cost. Under this cost method, actuarial gains and losses are directly reflected in the size of the unfunded actuarial liability.

The portion of unfunded liability, after subtracting payments due from municipalities paying for prior service, is amortized over a rolling 10-year period as a percentage of payroll. All payments are determined assuming total payroll increases by the annual inflation rate. Use of a rolling amortization period means that the UAL amount is never anticipated to be fully paid off. This method was chosen to provide a more level contribution rate over time.

#### 2. Actuarial Value of Assets

For purposes of determining the employer contribution rate to the Plan, we use an actuarial value of assets. This asset smoothing method dampens the volatility in asset values that could occur because of fluctuations in market conditions. Use of an asset smoothing method is consistent with the long-term nature of the actuarial valuation process.

The actuarial value of assets is a weighted average giving 20% weight to the current market value and 80% weight to the prior year's actuarial value increased by expected interest and contributions and decreased by benefit payments and expenses. This is mathematically equivalent to recognizing 100% of the actuarially assumed interest rate, plus contributions, less payment each year, and 20% of the portion of each year's returns that have not already been reflected in asset values.

#### 3. Changes Since Last Valuation

None

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

This appendix provides a summary of the Plan provisions. Where the Plan, as determined by the State Code and the Plan Rules and Regulations, and this summary differ, the Plan governs.

### 1. Membership

The Plan covers an individual who is employed on a full-time basis as a police officer by a county or municipality in Delaware, an individual who is employed on a full-time basis as a uniformed firefighter by the City of Wilmington, or an individual employed on a full-time basis as a uniformed paramedic by a county in Delaware.

### 2. Member Contributions

7% of compensation

Interest is credited at the rate of 5% per year

Member contributions are made through an “employer pick-up” arrangement, which results in deferral of taxes on the contributions.

### 3. Credited Service

All service as a member plus certain claimed and purchased service.

### 4. Final Average Compensation

Final average compensation (FAC) is the average over the highest 36 consecutive months (or shorter period of total service).

### 5. Normal Retirement

Eligibility: (i) age 62 with five years of credited service, or (ii) any age with 20 years of credited service, or (iii) 10 years of credited service when age plus service equals 75

Benefit: 2.5% of final average compensation for each year of credited service, up to 20 years, plus 3.5% of final average compensation for each year of credited service over 20 years

### 6. Duty-Connected Disability Benefit

Eligibility: Disabled in the performance of his or her duties

Benefit: If member is totally disabled: 75% of final average compensation at the time disability commenced plus 10% for each eligible dependent not to exceed 100%

**APPENDIX C – SUMMARY OF PLAN PROVISIONS**

If member is partially disabled: the normal retirement benefit based on credited service at date of disability that is not less than 50% of final average compensation at the time disability commences.

**7. Ordinary Disability**

Eligibility: Five years of credited service

Benefit: If member is totally disabled: the normal retirement benefit based on credited service at date of disability that is not less than 50% of the final average compensation at the time of disability plus 5% for each eligible dependent to a maximum of 70%.

If member is partially disabled: the normal retirement benefit based on credited service at the date of disability that is not less than 30% of final average compensation at the time of retirement.

**8. Survivor's Benefit**

Eligibility: Death while active

Benefit: For eligible survivors of employees who die in active service: 50% of salary, payable to the primary survivor.

Eligible survivors include: (1) widow or widower, or (2) child or children under 18, or between 18 and 22 and attending school on a full-time basis, or over 18 and permanently disabled before 18, or (3) dependent parent or parents.

**9. Burial Benefit**

\$7,000 lump sum, paid at death for participants in active employment.

**10. Vesting**

Eligibility: Five years of credited service

Benefit: Normal retirement benefit payable at age 62 based on final average compensation and service at date of termination. In lieu of a pension, a member may receive a refund of accumulated contributions with interest. Upon application for a refund of contributions, a member's vested right to a monthly benefit shall be forfeited.

**DELAWARE COUNTY & MUNICIPAL POLICE/FIREFIGHTERS PENSION PLAN  
ACTUARIAL VALUATION AS OF JUNE 30, 2023**

**APPENDIX C – SUMMARY OF PLAN PROVISIONS**

**11. Withdrawal**

Eligibility: Terminated service  
Benefit: Accumulated employee contributions with interest

**12. Form of Payment**

The normal form of payment is a 50% joint and survivor annuity.

As an alternative to the normal form, a member may elect one of the following optional forms of payment upon service retirement or disability:

- 66 2/3% joint and survivor form with a 2% reduction in benefits,
- 75% joint and survivor form with a 3% reduction in benefits, or
- 100% joint and survivor form with a 6% reduction in benefits.

The 66 2/3% and 100% options are only available for retirement on or after January 1, 2015.

**13. Cost-of-Living Adjustments**

Cost-of-living adjustments are made only on an ad hoc basis.

**14. Changes Since Last Valuation**

None



*Classic Values, Innovative Advice*