

CITY OF WASHINGTON
POLICE PENSION FUND
ACTUARIAL VALUATION
AS OF MAY 1, 2022
CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING APRIL 30, 2024
GASB 67/68 DISCLOSURE INFORMATION
AS OF APRIL 30, 2022



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS



November 29, 2022

Ms. Joan E. Baxter
City of Washington Police Pension Fund

Re: Actuarial Valuation Report (including GASB Statements No. 67 and No. 68) – City of Washington Police Pension Fund

Dear Ms. Baxter:

We are pleased to present to the City this report of the annual actuarial valuation of the City of Washington Police Pension Fund. Included are the related results for GASB Statements No. 67 and No. 68. The funding valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. The calculation of the liability for GASB results was performed for the purpose of satisfying the requirements of GASB Statements No. 67 and No. 68. Use of the results for other purposes may not be applicable and could produce significantly different results.

The valuations have been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflect laws and regulations issued to date pursuant to the provisions of Article 3, Illinois Pension Code, as well as applicable federal laws and regulations. In our opinion, the assumptions used in this valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations. Due to the limited scope of the valuations, we did not perform an analysis of the potential range of such future measurements.

The funding percentages and unfunded accrued liability as measured based on the actuarial value of assets will differ from similar measures based on the market value of assets. These measures, as provided, are appropriate for determining the adequacy of future contributions, but may not be appropriate for the purpose of settling a portion or all of its liabilities.

In conducting the valuations, we have relied on personnel, plan design, and asset information supplied by the City, financial reports prepared by the custodian bank and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

The total pension liability, net pension liability, and certain sensitivity information shown in the GASB results are based on an actuarial valuation performed as of the valuation date.

In performing the analysis, we used third-party software to model (calculate) the underlying liabilities and costs. These results are reviewed in the aggregate and for individual sample lives. The output from the software is either used directly or input into internally developed models to generate the costs. All internally developed models are reviewed as part of the process. As a result of this review, we believe that the models have produced reasonable results. We do not believe there are any material inconsistencies among assumptions or unreasonable output produced due to the aggregation of assumptions.

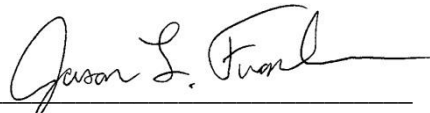
The undersigned are familiar with the immediate and long-term aspects of pension valuations and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

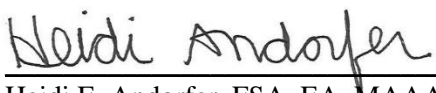
To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the City of Washington, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the City of Washington Police Pension Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 630-620-0200.

Respectfully submitted,

Foster & Foster, Inc.

By: 
Jason L. Franken, FSA, EA, MAAA

By: 
Heidi E. Andorfer, FSA, EA, MAAA

JLF/lke
Enclosures

TABLE OF CONTENTS

Section	Title	Page
I	Introduction	
	a. Summary of Report	5
	b. Changes Since Prior Valuation	6
	c. Comparative Summary of Principal Valuation Results	7
II	Valuation Information	
	a. Development of Amortization Payment	12
	b. Detailed Actuarial (Gain)/Loss Analysis	13
	c. Reconciliation of Changes in Contribution Requirement	14
	d. Projection of Benefit Payments	15
	e. Actuarial Assumptions and Methods	16
	f. Glossary	19
	g. Discussion of Risk	20
III	Trust Fund	23
IV	Member Statistics	
	a. Statistical Data	27
	b. Age and Service Distribution	28
	c. Valuation Participant Reconciliation	29
V	Summary of Current Plan	30
VI	Governmental Accounting Standards Board Statements No. 67 and No. 68 Disclosure Information	33

SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Washington Police Pension Fund, performed as of May 1, 2022, has been completed and the results are presented in this report. The contribution amounts set forth herein are applicable to the plan/fiscal year ended April 30, 2024.

The contribution requirements, compared with those set forth in the May 1, 2021 actuarial report, are as follows:

Valuation Date	5/1/2022	5/1/2021
Applicable to Fiscal Year Ending	<u>4/30/2024</u>	<u>4/30/2023</u>
Total Recommended Contribution	\$959,481	\$876,145
% of Projected Annual Payroll	58.9%	53.2%
Member Contributions (Est.)	(161,527)	(163,118)
% of Projected Annual Payroll	(9.9%)	(9.9%)
City Recommended Contribution	797,954	713,027
% of Projected Annual Payroll	49.0%	43.3%

As you can see, the Total Recommended Contribution shows an increase when compared to the results determined in the May 1, 2021 actuarial valuation report. The increase is attributable to assumption changes and the natural increase in the amortization payment due to the payroll growth assumption.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. Sources of unfavorable experience included an investment return of -2.03% (Actuarial Asset Basis) which fell short of the 6.75% assumption, an average salary increase of 6.74% which exceeded the 5.54% assumption, and more retirements than expected. These losses were offset in part by a gain associated with more turnover than expected.

CHANGES SINCE PRIOR VALUATION

Plan Changes Since Prior Valuation

There were no plan changes since the prior valuation.

Actuarial Assumption/Method Changes Since Prior Valuation

Based on the results of the 2022 experience study performed for the Illinois Police Officers' Pension Investment Fund, the following assumption changes were made:

- Updated mortality, retirement, disability, and termination rate tables.
- Updated assumed salary increase rates.
- Reduced assumed payroll growth rate from 3.50% to 3.25%.

There were no method changes since the prior valuation.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Assump <u>5/1/2022</u>	Old Assump <u>5/1/2022</u>	<u>5/1/2021</u>
A. Participant Data			
Number Included			
Actives	22	22	22
Service Retirees	9	9	8
Beneficiaries	4	4	4
Disability Retirees	0	0	0
Terminated Vested	<u>4</u>	<u>4</u>	<u>4</u>
Total	39	39	38
Total Annual Payroll	\$1,629,944	\$1,629,944	\$1,645,994
Payroll Under Assumed Ret. Age	1,629,944	1,629,944	1,645,994
Annual Rate of Payments to:			
Service Retirees	555,758	555,758	489,764
Beneficiaries	162,201	162,201	162,201
Disability Retirees	0	0	0
Terminated Vested	0	0	0
B. Assets			
Actuarial Value	9,325,564	9,325,564	9,506,948
Market Value	8,906,853	8,906,853	9,838,568
C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	8,243,370	7,906,812	8,407,254
Disability Benefits	823,864	842,833	882,746
Death Benefits	116,344	120,250	131,027
Vested Benefits	446,456	506,347	564,530
Service Retirees	8,945,836	9,014,906	8,005,743
Beneficiaries	1,382,405	1,429,905	1,464,740
Disability Retirees	0	0	0
Terminated Vested	<u>14,864</u>	<u>14,864</u>	<u>58,478</u>
Total	19,973,139	19,835,917	19,514,518

C. Liabilities - (Continued)	New Assump <u>5/1/2022</u>	Old Assump <u>5/1/2022</u>	<u>5/1/2021</u>
Present Value of Future Salaries	17,926,921	17,516,647	18,068,309
Present Value of Future Member Contributions	1,776,558	1,735,900	1,790,569
Normal Cost (Retirement)	294,810	288,640	298,335
Normal Cost (Disability)	54,667	56,925	59,640
Normal Cost (Death)	7,098	7,706	7,800
Normal Cost (Vesting)	<u>33,982</u>	<u>35,144</u>	<u>35,177</u>
Total Normal Cost	390,557	388,415	400,952
Present Value of Future Normal Costs	3,863,826	3,753,485	3,988,378
Accrued Liability (Retirement)	5,267,577	5,080,684	5,390,224
Accrued Liability (Disability)	263,708	270,933	279,591
Accrued Liability (Death)	36,505	35,609	42,815
Accrued Liability (Vesting)	198,418	235,531	284,549
Accrued Liability (Inactives)	<u>10,343,105</u>	<u>10,459,675</u>	<u>9,528,961</u>
Total Actuarial Accrued Liability	16,109,313	16,082,432	15,526,140
Unfunded Actuarial Accrued Liability (UAAL)	6,783,749	6,756,868	6,019,192
Funded Ratio (AVA / AL)	57.9%	58.0%	61.2%

	New Assump <u>5/1/2022</u>	Old Assump <u>5/1/2022</u>	<u>5/1/2021</u>
D. Actuarial Present Value of Accrued Benefits			
Vested Accrued Benefits			
Inactives	10,343,105	10,459,675	9,528,961
Actives	1,334,883	1,324,924	1,622,305
Member Contributions	<u>1,227,880</u>	<u>1,227,880</u>	<u>1,319,648</u>
Total	12,905,868	13,012,479	12,470,914
Non-vested Accrued Benefits	<u>375,006</u>	<u>349,028</u>	<u>304,614</u>
Total Present Value Accrued Benefits	13,280,874	13,361,507	12,775,528
Funded Ratio (MVA / PVAB)	67.1%	66.7%	77.0%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	(80,633)	0	
Plan Experience	0	626,063	
Benefits Paid	0	(872,969)	
Interest	0	832,885	
Other	<u>0</u>	<u>0</u>	
Total	(80,633)	585,979	

Valuation Date	New Assump 5/1/2022	Old Assump 5/1/2022	5/1/2021
Applicable to Fiscal Year Ending	<u>4/30/2024</u>	<u>4/30/2024</u>	<u>4/30/2023</u>

E. Pension Cost

Normal Cost ¹	\$416,920	\$414,633	\$428,016
% of Total Annual Payroll ¹	25.6	25.4	26.0
Administrative Expenses ¹	16,361	16,361	7,786
% of Total Annual Payroll ¹	1.0	1.0	0.5
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 18 years (as of 5/1/2022) ¹	526,200	514,520	440,343
% of Total Annual Payroll ¹	32.3	31.6	26.7
Total Recommended Contribution	959,481	945,514	876,145
% of Total Annual Payroll ¹	58.9	58.0	53.2
Expected Member Contributions ¹	(161,527)	(161,527)	(163,118)
% of Total Annual Payroll ¹	(9.9)	(9.9)	(9.9)
Expected City Contribution	797,954	783,987	713,027
% of Total Annual Payroll ¹	49.0	48.1	43.3

F. Past Contributions

Plan Years Ending:	<u>4/30/2022</u>
Total Recommended Contribution	839,219
City	679,478
Actual Contributions Made:	
Members (excluding buyback)	159,741
City	<u>690,713</u>
Total	850,454

G. Net Actuarial (Gain)/Loss

¹ Contributions developed as of 5/1/2022 displayed above have been adjusted to account for assumed interest.

H. Schedule Illustrating the Amortization of the Total Unfunded Actuarial Accrued Liability as of:

<u>Year</u>	<u>Projected Unfunded Accrued Liability</u>
2022	6,783,749
2023	6,715,452
2024	6,625,444
2028	6,005,488
2032	4,845,828
2036	2,936,916
2040	0

I. (i) 5 Year Comparison of Actual and Assumed Salary Increases

		<u>Actual</u>	<u>Assumed</u>
Year Ended	4/30/2022	6.74%	5.54%
Year Ended	4/30/2021	4.20%	5.44%
Year Ended	4/30/2020	4.68%	5.67%
Year Ended	4/30/2019	3.67%	6.04%
Year Ended	4/30/2018	3.86%	6.45%

(ii) 5 Year Comparison of Investment Return on Actuarial Value

		<u>Actual MVA</u>	<u>Actual AVA</u>	<u>Assumed</u>
Year Ended	4/30/2022	-3.11%	-2.03%	6.75%
Year Ended	4/30/2021	17.89%	6.74%	6.75%
Year Ended	4/30/2020	0.20%	3.54%	6.75%
Year Ended	4/30/2019	4.44%	4.27%	6.75%
Year Ended	4/30/2018	5.58%	4.43%	6.75%

DEVELOPMENT OF MAY 1, 2022 AMORTIZATION PAYMENT

(1)	Unfunded Actuarial Accrued Liability as of May 1, 2021	\$6,019,192
(2)	Sponsor Normal Cost developed as of May 1, 2021	237,834
(3)	Expected administrative expenses for the year ended April 30, 2022	7,294
(4)	Expected interest on (1), (2) and (3)	422,595
(5)	Sponsor contributions to the System during the year ended April 30, 2022	690,713
(6)	Expected interest on (5)	23,312
(7)	Expected Unfunded Actuarial Accrued Liability as of April 30, 2022, (1)+(2)+(3)+(4)-(5)-(6)	5,972,890
(8)	Change to UAAL due to Assumption Change	26,881
(9)	Change to UAAL due to Actuarial (Gain)/Loss	783,978
(10)	Unfunded Accrued Liability as of May 1, 2022	6,783,749
(11)	UAAL Subject to Amortization (100% AAL less Actuarial Assets)	6,783,749

<u>Date</u> <u>Established</u>	<u>Years</u> <u>Remaining</u>	<u>5/1/2022</u> <u>Amount</u>	<u>Amortization</u> <u>Amount</u>
5/1/2022	18	6,783,749	492,927

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of May 1, 2021	\$6,019,192
(2) Expected UAAL as of May 1, 2022	5,972,890
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	834,862
Salary Increases	147,903
Active Decrements	(490,625)
Inactive Mortality	61,922
Other	<u>229,916</u>
Change in UAAL due to (Gain)/Loss	783,978
Change to UAAL due to Assumption Change	<u>26,881</u>
(4) Actual UAAL as of May 1, 2022	\$6,783,749

RECONCILIATION OF CHANGES IN CONTRIBUTION REQUIREMENT

(1) Contribution Determined as of May 1, 2021	\$ 713,027
(2) Summary of Contribution Impact by component:	
Change in Normal Cost	(13,383)
Change in Assumed Administrative Expense	8,575
Investment Return (Actuarial Asset Basis)	63,573
Salary Increases	11,262
New Entrants	1,437
Active Decrements	(37,360)
Inactive Mortality	4,715
Contributions (More) or Less than Recommended	(884)
Increase in Amortization Payment Due to Payroll Growth Assumption	15,412
Change in Expected Member Contributions	1,591
Assumption Change	13,967
Other	<u>16,022</u>
Total Change in Contribution	84,927
(3) Contribution Determined as of May 1, 2022	\$797,954

PROJECTION OF BENEFIT PAYMENTS

Year	Payments for Current Actives	Payments for Current Inactives	Total Payments
2022	31,540	728,458	759,998
2023	61,033	724,306	785,339
2024	86,905	734,774	821,679
2025	117,323	744,933	862,256
2026	148,229	754,711	902,940
2027	175,002	764,027	939,029
2028	199,243	772,796	972,039
2029	227,320	780,930	1,008,250
2030	268,640	788,341	1,056,981
2031	319,089	794,943	1,114,032
2032	368,504	800,641	1,169,145
2033	420,168	805,332	1,225,500
2034	473,914	808,900	1,282,814
2035	532,074	811,201	1,343,275
2036	586,863	812,064	1,398,927
2037	648,740	811,280	1,460,020
2038	727,092	808,621	1,535,713
2039	800,732	803,826	1,604,558
2040	869,174	796,613	1,665,787
2041	936,131	786,701	1,722,832
2042	1,023,820	773,836	1,797,656
2043	1,120,971	757,793	1,878,764
2044	1,196,604	738,421	1,935,025
2045	1,272,257	715,651	1,987,908
2046	1,336,364	689,507	2,025,871
2047	1,412,589	660,093	2,072,682
2048	1,477,985	627,576	2,105,561
2049	1,552,795	592,175	2,144,970
2050	1,619,039	554,223	2,173,262
2051	1,685,840	514,139	2,199,979
2052	1,744,136	472,385	2,216,521
2053	1,821,062	429,485	2,250,547
2054	1,899,099	386,048	2,285,147
2055	1,953,392	342,749	2,296,141
2056	1,991,280	300,297	2,291,577
2057	2,020,447	259,404	2,279,851
2058	2,041,176	220,704	2,261,880
2059	2,055,621	184,741	2,240,362
2060	2,063,612	151,954	2,215,566
2061	2,064,931	122,653	2,187,584

ACTUARIAL ASSUMPTIONS AND METHODS

Interest Rate	6.75% per year compounded annually, net of investment related expenses. We will continue to monitor this assumption in light of the target asset allocation of the trust and the expected long-term return by asset class.
Mortality Rate	<p><i>Active Lives:</i> PubS-2010 Employee mortality, unadjusted, with generational improvements with most recent projection scale (currently Scale MP-2021). 10% of active deaths are assumed to be in the line of duty.</p> <p><i>Inactive Lives:</i> PubS-2010 Healthy Retiree mortality, adjusted by a factor of 1.15 for male retirees and unadjusted for female retirees, with generational improvements with most recent projection scale (currently Scale MP-2021).</p> <p><i>Beneficiaries:</i> PubS-2010 Survivor mortality, unadjusted for male beneficiaries and adjusted by a factor of 1.15 for female beneficiaries, with generational improvements with most recent projection scale (currently Scale MP-2021).</p> <p><i>Disabled Lives:</i> PubS-2010 Disabled mortality, adjusted by a factor of 1.08 for male disabled members and unadjusted for female disabled members, with generational improvements with most recent projection scale (currently Scale MP-2021).</p> <p>The mortality assumptions sufficiently accommodate anticipated future mortality improvements.</p>
Retirement Age	See table at end of this section. This is based on a 2022 experience study performed for the Illinois Police Officers' Pension Investment Fund.
Disability Rate	See table at end of this section. 60% of the disabilities are assumed to be in the line of duty. This is based on a 2022 experience study performed for the Illinois Police Officers' Pension Investment Fund.
Termination Rate	See table at end of this section. This is based on a 2022 experience study performed for the Illinois Police Officers' Pension Investment Fund.

Salary Increases

See table below. This is based on a 2022 experience study performed for the Illinois Police Officers' Pension Investment Fund.

Salary Scale	
Service	Rate
0	11.00%
1	9.50%
2	8.00%
3	7.50%
4	7.00%
5	6.00%
6	5.00%
7 - 11	4.00%
12 - 29	3.75%
30+	3.50%

Inflation

2.50%.

Cost-of-Living Adjustment

Tier 1: 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.

Tier 2: 1.25% per year after the later of attainment of age 60 or first anniversary of retirement.

Marital Status

80% of Members are assumed to be married.

Spouse's Age

Males are assumed to be three years older than females.

Funding Method

Entry Age Normal Cost Method.

Actuarial Asset Method

Investment gains and losses are smoothed over a 5-year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. Actuarial Assets shall not be less than 80% nor greater than 120% of the Market Value of Assets.

Funding Policy Amortization Method

The UAAL is amortized according to a Level Percentage of Payroll method over a period ending in 2040. The initial amortization amount is 100% of the Accrued Liability less the Actuarial Value of Assets.

Payroll Growth

3.25% per year.

Administrative Expenses

Expenses paid out of the fund other than investment-related expenses are assumed to be equal to those paid in the previous year.

Decrement Tables

% Terminating During the Year		% Becoming Disabled During the Year		% Retiring During the Year (Tier 1)		% Retiring During the Year (Tier 2)	
Service	Rate	Age	Rate	Age	Rate	Age	Rate
0	13.00%	20	0.000%	50 - 54	20%	50 - 54	5%
1	8.00%	25	0.029%	55 - 62	25%	55	40%
2	7.00%	30	0.133%	63	33%	56 - 62	25%
3	6.00%	35	0.247%	64	40%	63	33%
4	5.00%	40	0.399%	65 - 69	55%	64	40%
5	4.50%	45	0.561%	70+	100%	65 - 69	55%
6	4.00%	50	0.675%			70+	100%
7	3.50%	55	0.855%				
8	3.00%	60	1.093%				
9	2.50%						
10	2.25%						
11	2.00%						
12	1.75%						
13	1.50%						
14+	1.25%						

GLOSSARY

Total Annual Payroll is the projected annual rate of pay for the fiscal year following the valuation date of all covered members.

Present Value of Benefits is the single sum value on the valuation date of all future benefits to be paid to current Members, Retirees, Beneficiaries, Disability Retirees and Vested Terminations.

Accrued Actuarial Liability is determined according to the plan's actuarial cost method. This amount represents the portion of the anticipated future benefits allocated to years prior to the valuation date.

Normal (Current Year's) Cost is the current year's cost for benefits yet to be funded.

Market Value of Assets is the fair market value of plan assets as of the valuation date. This amount may be adjusted to produce an Actuarial Value of Assets for plan funding purposes.

Actuarial Value of Assets is the asset value used in the valuation to determine contribution requirements. It represents the plan's Market Value of Assets, with adjustments according to the Actuarial Asset Method. These adjustments produce a "smoothed" value that is likely to be less volatile from year to year than the Market Value of Assets.

Unfunded Accrued Liability is the excess of the Accrued Actuarial Liability over the Actuarial Value of Assets.

Total Recommended Contribution is equal to the Normal Cost plus an amount sufficient to amortize the Unfunded Accrued Liability over a period ending in 2040. The recommended amount is adjusted for interest according to the timing of contributions during the year.

Entry Age Normal Cost Method - Under this method, the normal cost is the sum of the individual normal costs for all active participants. For an active participant, the normal cost is the participant's normal cost accrual rate, multiplied by the participant's current compensation.

- (a) The normal cost accrual rate equals:
 - (i) the present value of future benefits for the participant, determined as of the participant's entry age, divided by
 - (ii) the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.
- (b) In calculating the present value of future compensation, the salary scale is applied both retrospectively and prospectively to estimate compensation in years prior to and subsequent to the valuation year based on the compensation used for the valuation.
- (c) The accrued liability is the sum of the individual accrued liabilities for all participants and beneficiaries. A participant's accrued liability equals the present value, at the participant's attained age, of future benefits less the present value at the participant's attained age of the individual normal costs payable in the future. A beneficiary's accrued liability equals the present value, at the beneficiary's attained age, of future benefits.
- (d) Under this method, the entry age used for each active participant is the participant's age at the time he or she would have commenced participation if the plan had always been in existence under current terms, or the age as of which he or she first earns service credits for purposes of benefit accrual under the current terms of the plan.

DISCUSSION OF RISK

ASOP No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions, states that the actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition.

Throughout this report, actuarial results are determined under various assumption scenarios. These results are based on the premise that all future plan experience will align with the plan's actuarial assumptions; however, there is no guarantee that actual plan experience will align with the plan's assumptions. It is possible that actual plan experience will differ from anticipated experience in an unfavorable manner that will negatively impact the plan's funded position.

Below are examples of ways in which plan experience can deviate from assumptions and the potential impact of that deviation. Typically, this results in an actuarial gain or loss representing the current-year financial impact on the plan's unfunded liability of the experience differing from assumptions; this gain or loss is amortized over a period of time determined by the plan's amortization method. When assumptions are selected that adequately reflect plan experience, gains and losses typically offset one another in the long term, resulting in a relatively low impact on the plan's contribution requirements associated with plan experience. When assumptions are too optimistic, losses can accumulate over time and the plan's amortization payment could potentially grow to an unmanageable level.

- Investment Return: When the rate of return on the Actuarial Value of Assets falls short of the assumption, this produces a loss representing assumed investment earnings that were not realized. Further, it is unlikely that the plan will experience a scenario that matches the assumed return in each year as capital markets can be volatile from year to year. Therefore, contribution amounts can vary in the future.
- Salary Increases: When a plan participant experiences a salary increase that was greater than assumed, this produces a loss representing the cost of an increase in anticipated plan benefits for the participant as compared to the previous year. The total gain or loss associated with salary increases for the plan is the sum of salary gains and losses for all active participants.
- Payroll Growth: The plan's payroll growth assumption, if one is used, causes a predictable annual increase in the plan's amortization payment in order to produce an amortization payment that remains constant as a percentage of payroll if all assumptions are realized. If payroll does not increase according to the plan's payroll growth assumption, the plan's amortization payment can increase significantly as a percentage of payroll even if all assumptions other than the payroll growth assumption are realized.
- Demographic Assumptions: Actuarial results take into account various potential events that could happen to a plan participant, such as retirement, termination, disability, and death. Each of these potential events is assigned a liability based on the likelihood of the event and the financial consequence of the event for the plan. Accordingly, actuarial liabilities reflect a blend of financial consequences associated with various possible outcomes (such as retirement at one of various possible ages). Once the outcome is known (e.g. the participant retires) the liability is adjusted to reflect the known outcome. This adjustment produces a gain or loss depending on whether the outcome was more or less favorable than other outcomes that could have occurred.
- Contribution Risk: This risk results from the potential that actual employer contributions may deviate from actuarially determined contributions, which are determined in accordance with the

Board's funding policy. The funding policy is intended to result in contribution requirements that if paid when due, will result in a reasonable expectation that assets will accumulate to be sufficient to pay plan benefits when due. Contribution deficits, particularly large deficits and those that occur repeatedly, increase future contribution requirements and put the plan at risk for not being able to pay plan benefits when due.

Impact of Plan Maturity on Risk

For newer pension plans, most of the participants and associated liabilities are related to active members who have not yet reached retirement age. As pension plans continue in operation and active members reach retirement ages, liabilities begin to shift from being primarily related to active members to being shared amongst active and retired members. Plan maturity is a measure of the extent to which this shift has occurred. It is important to understand that plan maturity can have an impact on risk tolerance and the overall risk characteristics of the plan. For example, plans with a large amount of retired liability do not have as long of a time horizon to recover from losses (such as losses on investments due to lower than expected investment returns) as plans where the majority of the liability is attributable to active members. For this reason, less tolerance for investment risk may be warranted for highly mature plans with a substantial inactive liability. Similarly, mature plans paying substantial retirement benefits resulting in a small positive or net negative cash flow can be more sensitive to near term investment volatility, particularly if the size of the fund is shrinking, which can result in less assets being available for investment in the market.

To assist with determining the maturity of the plan, we have provided some relevant metrics in the table following titled "Plan Maturity Measures and Other Risk Metrics". Highlights of this information are discussed below:

- The Support Ratio, determined as the ratio of active to inactive members, has decreased from 140.0% on May 1, 2019 to 129.4% on May 1, 2022, indicating that the plan has been rapidly maturing.
- The Accrued Liability Ratio, determined as the ratio of the Inactive Accrued Liability, which is the liability associated with members who are no longer employed but are due a benefit from the plan, to the Total Accrued Liability, is 64.2%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors will need to be made up for over a shorter time horizon than would be needed for a less mature plan.
- The Funded Ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has decreased from 59.3% on May 1, 2019 to 57.9% on May 1, 2022, due mainly to plan experience.
- The Net Cash Flow Ratio, determined as the ratio of the Net Cash Flow (contributions minus benefit payments and administrative expenses) to the Market Value of Assets, stayed approximately the same from May 1, 2019 to May 1, 2022. The current Net Cash Flow Ratio of 0.1% indicates that contributions are generally covering the plan's benefit payments and administrative expenses.

It is important to note that the actuary has identified the risks above as the most significant risks based on the characteristics of the plan and the nature of the project, however, it is not an exhaustive list of potential risks that could be considered. Additional advanced modeling, as well as the identification of additional risks, can be provided at the request of the audience addressed on page 2 of this report.

PLAN MATURITY MEASURES AND OTHER RISK METRICS

	<u>5/1/2022</u>	<u>5/1/2021</u>	<u>5/1/2020</u>	<u>5/1/2019</u>
<u>Support Ratio</u>				
Total Actives	22	22	21	21
Total Inactives	17	16	16	15
Actives / Inactives	129.4%	137.5%	131.3%	140.0%

Asset Volatility Ratio

Market Value of Assets (MVA)	8,906,853	9,838,568	8,247,378	8,075,755
Total Annual Payroll	1,629,944	1,645,994	1,521,288	1,473,074
MVA / Total Annual Payroll	546.5%	597.7%	542.1%	548.2%

Accrued Liability (AL) Ratio

Inactive Accrued Liability	10,343,105	9,528,961	9,493,244	9,477,819
Total Accrued Liability	16,109,313	15,526,140	14,856,346	14,081,940
Inactive AL / Total AL	64.2%	61.4%	63.9%	67.3%

Funded Ratio

Actuarial Value of Assets (AVA)	9,325,564	9,506,948	8,803,784	8,350,414
Total Accrued Liability	16,109,313	15,526,140	14,856,346	14,081,940
AVA / Total Accrued Liability	57.9%	61.2%	59.3%	59.3%

Net Cash Flow Ratio

Net Cash Flow ¹	11,375	106,261	154,984	86,660
Market Value of Assets (MVA)	8,906,853	9,838,568	8,247,378	8,075,755
Ratio	0.1%	1.1%	1.9%	1.1%

¹ Determined as total contributions minus benefit payments and administrative expenses.

STATEMENT OF FIDUCIARY NET POSITION
April 30, 2022

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Checking Account	4,382
Certificates of Deposit	668,032
Money Market	1,977,708
Total Cash and Equivalents	2,650,122
Receivables:	
Member Contributions	18,856
Purchased Interest	198
Accrued Past Due Interest	12,896
Total Receivable	31,950
Investments:	
Corporate Bonds	1,601,429
U.S. Gov't and Agency Obligations	673,963
Mutual Funds	3,952,896
Total Investments	6,228,288
Total Assets	8,910,360
<u>LIABILITIES</u>	
Liabilities:	
Payable:	
To Municipality	2,807
Expenses Due and Unpaid	700
Total Liabilities	3,507
Net Assets:	
Active and Retired Members' Equity	8,906,853
NET POSITION RESTRICTED FOR PENSIONS	8,906,853
TOTAL LIABILITIES AND NET ASSETS	8,910,360

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED April 30, 2022
Market Value Basis

ADDITIONS

Contributions:

Member	159,741
Miscellaneous Member Revenue	49,216
City	690,713

Total Contributions		899,670
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Investment Income:

Miscellaneous Income	3,558	
Net Realized Gain (Loss)	221,133	
Unrealized Gain (Loss)	(940,178)	
Net Increase in Fair Value of Investments		(715,487)
Interest & Dividends		459,037
Less Investment Expense ¹		(29,121)

Net Investment Income		(285,571)
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Total Additions		614,099
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DEDUCTIONS

Distributions to Members:

Benefit Payments	698,096
Refund of Contributions/Transfers	174,873

Total Distributions		872,969
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Administrative Expenses		15,326
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Total Deductions		888,295
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Net Increase in Net Position		(274,196)
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NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year		9,838,568
Adjustment to beginning of year		(657,519)

End of the Year		8,906,853
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¹ Investment Related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION

April 30, 2022

Development of Actuarial Value of Assets

Market Value of Assets, 4/30/2022	8,906,853
(Gains)/Losses Not Yet Recognized	418,711
Actuarial Value of Assets, 4/30/2022	9,325,564
4/30/2022 Limited Actuarial Assets:	9,325,564

Development of Investment Gain/Loss

Market Value of Assets, 4/30/2021	9,181,049
Contributions Less Benefit Payments & Administrative Expenses	11,375
Expected Investment Earnings ¹	620,105
Actual Net Investment Earnings	(285,571)
2022 Actuarial Investment Gain/(Loss)	(905,676)

¹ Expected Investment Earnings = 6.75% x (9,181,049 + 0.5 x 11,375)

Gains/(Losses) Not Yet Recognized

Plan Year		Amounts Not Yet Recognized by Valuation Year				
Ending	Gain/(Loss)	2022	2023	2024	2025	2026
4/30/2019	(177,373)	(35,475)	0	0	0	0
4/30/2020	(533,705)	(213,482)	(106,741)	0	0	0
4/30/2021	924,645	554,787	369,858	184,929	0	0
4/30/2022	(905,676)	(724,541)	(543,406)	(362,270)	(181,135)	0
Total		(418,711)	(280,289)	(177,341)	(181,135)	0

Development of Asset Returns

(A) 4/30/2021 Actuarial Assets:	9,506,948
(I) Net Investment Income:	
1. Interest and Dividends	462,595
2. Realized Gains (Losses)	221,133
3. Change in Actuarial Value	(847,366)
4. Investment Expenses	(29,121)
Total	(192,759)
(B) 4/30/2022 Actuarial Assets:	9,325,564
Actuarial Asset Rate of Return = (2 x I) / (A + B - I):	-2.03%
Market Value of Assets Rate of Return:	-3.11%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	(834,862)

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

April 30, 2022

Actuarial Asset Basis

INCOME

Contributions:

Member	159,741
Miscellaneous Member Revenue	49,216
City	690,713

Total Contributions	899,670
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Earnings from Investments

Interest & Dividends	459,037
Miscellaneous Income	3,558
Net Realized Gain (Loss)	221,133
Change in Actuarial Value	(847,366)

Total Earnings and Investment Gains	(163,638)
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EXPENSES

Administrative Expenses:

Investment Related ¹	29,121
Other	15,326

Total Administrative Expenses	44,447
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Distributions to Members:

Benefit Payments	698,096
Refund of Contributions/Transfers	174,873

Total Distributions	872,969
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Change in Net Assets for the Year	(181,384)
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Net Assets Beginning of the Year	9,506,948
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Net Assets End of the Year ²	9,325,564
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¹ Investment Related expenses include investment advisory, custodial and performance monitoring fees.

² Net Assets may be limited for actuarial consideration.

STATISTICAL DATA

	<u>5/1/2022</u>	<u>5/1/2021</u>	<u>5/1/2020</u>	<u>5/1/2019</u>
<u>Actives - Tier 1</u>				
Number	8	10	10	10
Average Current Age	43.7	43.6	42.6	41.6
Average Age at Employment	27.4	27.8	27.8	28.3
Average Past Service	16.3	15.8	14.8	13.3
Average Annual Salary	\$83,431	\$79,942	\$77,792	\$75,331
<u>Actives - Tier 2</u>				
Number	14	12	11	11
Average Current Age	33.6	35.4	35.1	34.2
Average Age at Employment	29.0	30.4	30.3	29.9
Average Past Service	4.6	5.0	4.8	4.3
Average Annual Salary	\$68,750	\$70,548	\$67,579	\$65,433
<u>Service Retirees</u>				
Number	9	8	8	10
Average Current Age	64.1	63.8	62.8	64.9
Average Annual Benefit	\$61,751	\$61,221	\$59,437	\$54,727
<u>Beneficiaries</u>				
Number	4	4	4	1
Average Current Age	73.6	72.6	71.6	78.5
Average Annual Benefit	\$40,550	\$40,550	\$40,550	\$35,587
<u>Disability Retirees</u>				
Number	0	0	0	1
Average Current Age	N/A	N/A	N/A	68.2
Average Annual Benefit	N/A	N/A	N/A	\$34,435
<u>Terminated Vested</u>				
Number	4	4	4	3
Average Current Age	35.2	35.6	34.6	33.7
Average Annual Benefit ¹	N/A	N/A	N/A	N/A

¹ Average Annual Benefit for Terminated Vested members reflects the benefit for members entitled to a future annual benefit from the plan.

AGE AND SERVICE DISTRIBUTION

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	3	0	0	0	0	0	0	0	0	0	0	3
25 - 29	1	0	0	0	1	0	0	0	0	0	0	2
30 - 34	0	1	0	1	0	1	0	0	0	0	0	3
35 - 39	0	0	1	0	0	1	3	1	0	0	0	6
40 - 44	0	0	0	0	0	0	2	0	0	0	0	2
45 - 49	0	0	0	0	0	3	0	0	0	0	0	3
50 - 54	0	0	0	0	0	0	0	1	2	0	0	3
55 - 59	0	0	0	0	0	0	0	0	0	0	0	0
60 - 64	0	0	0	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	0	0	0	0	0	0	0
Total	4	1	1	1	1	5	5	2	2	0	0	22

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 5/1/2021	22
b. Terminations	
i. Vested (partial or full) with deferred benefits	(1)
ii. Non-vested or full lump sum distribution received	(2)
iii. Transferred service to other fund	0
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	(1)
f. Continuing participants	18
g. New entrants	4
h. Total active life participants in valuation	22

2. Non-Active lives (including beneficiaries receiving benefits)

	Service Retirees, Vested Receiving <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested <u>Deferred</u>	<u>Total</u>
a. Number prior valuation	8	4	0	4	16
Retired	1	0	0	0	1
Vested Deferred	0	0	0	1	1
Death, With Survivor	0	0	0	0	0
Death, No Survivor	0	0	0	0	0
Disabled	0	0	0	0	0
Refund of Contributions	0	0	0	(1)	(1)
Rehires	0	0	0	0	0
Expired Annuities	0	0	0	0	0
Data Corrections	0	0	0	0	0
Hired/Termed in Same Year	0	0	0	0	0
b. Number current valuation	9	4	0	4	17

SUMMARY OF CURRENT PLAN

Article 3 Pension Fund

The Plan is established and administered as prescribed by “Article 3. Police Pension Fund – Municipalities 500,000 and Under” of the Illinois Pension Code.

Plan Administration

The Plan is a single employer defined benefit pension plan administered by a Board of Trustees comprised of:

- a.) Two members appointed by the Municipality,
- b.) Two active Members of the Police Department elected by the Membership, and
- c.) One retired Member of the Police Department elected by the Membership.

Credited Service

Complete years of service as a sworn police officer employed by the Municipality.

Normal Retirement

Date

Tier 1: Age 50 and 20 years of Credited Service.

Tier 2: Age 55 with 10 years of Credited Service.

Benefit

Tier 1: 50% of annual salary attached to rank on last day of service plus 2.50% of annual salary for each year of service over 20 years, up to a maximum of 75% of salary. The minimum monthly benefit is \$1,000 per month.

Tier 2: 2.50% per year of service times the average salary for the 48 consecutive months of service within the last 60 months of service in which the total salary was the highest prior to retirement times the number of years of service, up to a maximum of 75% of average salary. The minimum monthly benefit is \$1,000 per month.

For Tier 2 participants, the salary is capped at a rate of \$106,800 as of 2011, indexed annually at a rate of CPI-U, but not to exceed 3.00%.

Form of Benefit

Tier 1: For married retirees, an annuity payable for the life of the Member; upon the death of the member, 100% of the Member's benefit payable to the spouse until death. For unmarried retirees, the normal form is a Single Life Annuity.

Tier 2: Same as above, but with 66 2/3% of benefit continued to spouse.

Early Retirement

Date	Tier 1: Age 60 and 8 years of Credited Service. Tier 2: Age 50 with 10 years of Credited Service.
Benefit	Tier 1: Normal Retirement benefit with no minimum. Tier 2: Normal Retirement benefit, reduced 6.00% each year before age 55, with no minimum benefit.
Form of Benefit	Same as Normal Retirement

Disability Benefit

Eligibility	Total and permanent as determined by the Board of Trustees.
Benefit Amount	A maximum of:

- a.) 65% of salary attached to the rank held by Member on last day of service, and;
- b.) The monthly retirement pension that the Member is entitled to receive if he or she retired immediately.

For non-service connected disabilities, a benefit of 50% of salary attached to rank held by Member on last day of service.

Cost-of-Living Adjustment

Tier 1:

Retirees: An annual increase equal to 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.

Disabled Retirees: An annual increase equal to 3.00% per year of the original benefit amount beginning at age 60. Those that become disabled prior to age 60 receive an increase of 3.00% of the original benefit amount for each year since benefit commencement upon reaching age 60.

Tier 2: An annual increase each January 1 equal to 3.00% per year or one-half of the annual unadjusted percentage increase in the consumer price index-u for the 12 months ending with the September preceding each November 1, whichever is less, of the original pension after the attainment of age 60 or first anniversary of pension start date whichever is later.

Pre-Retirement Death Benefit

Service Incurred	100% of salary attached to rank held by Member on last day of service.
Non-Service Incurred	A maximum of: <ul style="list-style-type: none">a.) 54% of salary attached to the rank held by Member on last day of service, and;b.) The monthly retirement pension earned by the deceased Member at the time of death, regardless of whether death occurs before or after age 50.

For non-service deaths with less than 10 years of service, a refund of member contributions is provided.

Vesting (Termination)

Vesting Service Requirement	Tier 1: 8 years. Tier 2: 10 years.
Non-Vested Benefit	Refund of Member Contributions.
Vested Benefit	Either the termination benefit, payable upon reaching age 60 (55 for Tier 2), provided contributions are not withdrawn, or a refund of member contributions. The termination benefit is 2.50% of annual salary held in the year prior to termination (4-year final average salary for Tier 2) times creditable service.

Contributions

Employee	9.91% of Salary.
Municipality	Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability.

SUMMARY

Valuation Date	5/1/2022	5/1/2021
Measurement Date	4/30/2022	4/30/2021
Plan Membership:		
Inactives Currently Receiving Benefits	13	12
Inactives Not Yet Receiving Benefits	4	4
Active Plan Members	<u>22</u>	<u>22</u>
Total	39	38
Covered Payroll	\$ 1,611,917	\$ 1,645,994
Net Pension Liability		
Total Pension Liability	\$ 15,956,887	\$ 15,361,997
Plan Fiduciary Net Position	<u>8,906,853</u>	<u>9,838,568</u>
Net Pension Liability	\$ 7,050,034	\$ 5,523,429
Plan Fiduciary Net Position		
As a Percentage of Total Pension Liability	55.82%	64.04%
Net Pension Liability		
As a Percentage of Covered Payroll	437.37%	335.57%
Total Pension Expense	\$ 937,445	\$ 722,766
Development of Single Discount Rate		
Single Discount Rate	6.75%	6.75%
Long-Term Expected Rate of Return	6.75%	6.75%
High-quality Municipal Bond Rate	3.98%	1.83%
Number of Years Future Benefit Payments		
Are Expected to be Paid	99	99

SCHEDULE OF CHANGES IN NET PENSION LIABILITY

GASB 68 Reporting Period Ending Measurement Date	04/30/2023 04/30/2022	04/30/2022 04/30/2021
Total Pension Liability		
Service Cost	400,729	372,154
Interest	1,034,521	992,655
Changes of Benefit Terms	-	-
Differences Between Expected and Actual Experience	(50,484)	28,787
Changes of Assumptions	33,877	-
Contributions - Buy Back	49,216	8,526
Benefit Payments, Including Refunds of Employee Contributions	(872,969)	(747,942)
Net Change in Total Pension Liability	594,890	654,180
Total Pension Liability - Beginning	15,361,997	14,707,817
Total Pension Liability - Ending (a)	\$ 15,956,887	\$ 15,361,997
Plan Fiduciary Net Position		
Contributions - Employer	690,713	687,092
Contributions - Employee	159,741	165,879
Contributions - Buy Back	49,216	8,526
Net Investment Income	(285,571)	1,484,929
Benefit Payments, Including Refunds of Employee Contributions	(872,969)	(747,942)
Administrative Expense	(15,326)	(7,294)
Net Change in Plan Fiduciary Net Position	(274,196)	1,591,190
Plan Fiduciary Net Position - Beginning	9,838,568	8,247,378
Adjustment to beginning of year	(657,519)	-
Plan Fiduciary Net Position - Ending (b)	\$ 8,906,853	\$ 9,838,568
Net Pension Liability - Ending (a) - (b)	\$ 7,050,034	\$ 5,523,429
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	55.82%	64.04%
Covered Payroll	\$ 1,611,917	\$ 1,645,994
Net Pension Liability as a Percentage of Covered Payroll	437.37%	335.57%

STATEMENT OF CHANGES IN NET PENSION LIABILITY
CITY REPORTING

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a)-(b)
Reporting Period Ending April 30, 2022	\$ 15,361,997	\$ 9,838,568	\$ 5,523,429
Adjustment to beginning of year	-	(657,519)	657,519
Changes for a Year:			
Service Cost	400,729	-	400,729
Interest	1,034,521	-	1,034,521
Differences Between Expected and Actual Experience	(50,484)	-	(50,484)
Changes of Assumptions	33,877	-	33,877
Changes of Benefit Terms	-	-	-
Contributions - Employer	-	690,713	(690,713)
Contributions - Employee	-	159,741	(159,741)
Contributions - Buy Back	49,216	49,216	-
Net Investment Income	-	(285,571)	285,571
Benefit Payments, Including Refunds of Employee Contributions	(872,969)	(872,969)	-
Administrative Expense	-	(15,326)	15,326
Net Changes	594,890	(274,196)	869,086
Reporting Period Ending April 30, 2023	\$ 15,956,887	\$ 8,906,853	\$ 7,050,034

Sensitivity of Net Pension Liability to changes in the Discount Rate:

	Current Discount		
	1% Decrease	Rate	1% Increase
	5.75%	6.75%	7.75%
Sponsor's Net Pension Liability	\$ 9,403,951	\$ 7,050,034	\$ 5,137,709

Pension Plan Fiduciary Net Position

Detailed information about the Pension Plan's Fiduciary Net Position is available in a separately issued Plan financial report.

FINAL PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS
OF RESOURCES RELATED TO PENSIONS
YEAR-END APRIL 30, 2022

For the year ended April 30, 2022, the Sponsor will recognize a pension expense of \$722,766.

On April 30, 2022, the Sponsor reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between actual and expected experience	170,048	173,012
Changes of assumptions	452,251	53,824
Net difference between projected and actual earnings on pension plan investments	0	331,619
Employer contributions after the measurement date	690,713	0
Total	\$1,313,012	\$558,455

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer contributions subsequent to the measurement date has been recognized as a reduction of the Net Pension Liability in the year ended April 30, 2022.

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year-ended April 30:

2023	\$87,654
2024	\$70,730
2025	(\$33,267)
2026	(\$152,387)
2027	\$83,443
Thereafter	\$7,671

PRELIMINARY PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED
INFLOWS OF RESOURCES RELATED TO PENSIONS
YEAR-END APRIL 30, 2023

For the year ended April 30, 2023, the Sponsor will recognize a pension expense of \$937,445.

On April 30, 2023, the Sponsor reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between actual and expected experience	132,621	168,128
Changes of assumptions	343,363	40,368
Net difference between projected and actual earnings on pension plan investments	418,710	0
Employer contributions after the measurement date	TBD	0
Total	TBD	\$208,496

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in the year ended April 30, 2023.

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year-ended April 30:

2024	\$249,789
2025	\$145,792
2026	\$26,672
2027	\$262,502
2028	\$1,997
Thereafter	(\$554)

FINAL COMPONENTS OF PENSION EXPENSE
YEAR-END APRIL 30, 2022

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning Balance	\$ 6,460,439	\$ 300,183	\$ 2,023,803	
Employer Contributions made after April 30, 2021	-	-	690,713	-
Total Pension Liability Factors:				
Service Cost	372,154	-	-	372,154
Interest	992,655	-	-	992,655
Changes in Benefit Terms	-	-	-	-
Contributions - Buy Back	8,526	-	-	8,526
Differences Between Expected and Actual Experience With Regard to Economic or Demographic Assumptions	28,787	-	28,787	-
Current Year Amortization	-	(49,061)	(37,430)	(11,631)
Changes in Assumptions About Future Economic or Demographic Factors or Other Inputs	-	-	-	-
Current Year Amortization	-	(13,456)	(138,532)	125,076
Benefit Payments, Including Refunds of Employee Contributions	(747,942)	-	-	-
Net Change	654,180	(62,517)	543,538	1,486,780
Plan Fiduciary Net Position:				
Contributions - Employer	687,092	-	(687,092)	-
Contributions - Employee	165,879	-	-	(165,879)
Contributions - Buy Back	8,526	-	-	(8,526)
Projected Net Investment Income	560,284	-	-	(560,284)
Difference Between Projected and Actual Earnings on Pension Plan Investments	924,645	924,645	-	-
Current Year Amortization	-	(195,759)	(159,140)	(36,619)
Benefit Payments, Including Refunds of Employee Contributions	(747,942)	-	-	-
Administrative Expenses	(7,294)	-	-	7,294
Net Change	1,591,190	728,886	(846,232)	(764,014)
Ending Balance	\$ 5,523,429	\$ 966,552	\$ 1,721,109	\$ 722,766

PRELIMINARY COMPONENTS OF PENSION EXPENSE¹
YEAR-END APRIL 30, 2023

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning Balance	\$ 5,523,429	\$ 966,552	\$ 1,721,109	
Employer Contributions made after April 30, 2022	-	-	TBD ¹	-
Total Pension Liability Factors:				
Service Cost	400,729	-	-	400,729
Interest	1,034,521	-	-	1,034,521
Changes in Benefit Terms	-	-	-	-
Contributions - Buy Back	49,216			49,216
Differences Between Expected and Actual Experience With Regard to Economic or Demographic Assumptions	(50,484)	50,484	-	-
Current Year Amortization	-	(55,368)	(37,427)	(17,941)
Changes in Assumptions About Future Economic or Demographic Factors or Other Inputs	33,877	-	33,877	-
Current Year Amortization	-	(13,456)	(142,765)	129,309
Benefit Payments, Including Refunds of Employee Contributions	(872,969)	-	-	-
Net Change	594,890	(18,340)	(146,315)	1,595,834
Plan Fiduciary Net Position:				
Contributions - Employer	690,713	-	(690,713)	-
Contributions - Employee	159,741	-	-	(159,741)
Contributions - Buy Back	49,216			(49,216)
Projected Net Investment Income	620,105	-	-	(620,105)
Difference Between Projected and Actual Earnings on Pension Plan Investments	(905,676)	-	905,676	-
Current Year Amortization	-	(184,929)	(340,276)	155,347
Benefit Payments, Including Refunds of Employee Contributions	(872,969)	-	-	-
Administrative Expenses	(15,326)	-	-	15,326
Net Change	(274,196)	(184,929)	(125,313)	(658,389)
Adjustment to beginning of year	(657,519)	-	-	-
Ending Balance	\$ 7,050,034	\$ 763,283	TBD	\$ 937,445

¹ Employer contributions made after the April 30, 2022 measurement date, but before April 30, 2023 need to be added.

AMORTIZATION SCHEDULE – EXPERIENCE

Increase (Decrease) in Pension Expense Arising from the Recognition of the
Effects of Differences between Expected and Actual Experience

Year Base Established	Differences Between Expected and Actual Experience	Recognition Period (Years)	2023	2024	2025	2026	2027	Thereafter
2022	\$ (50,484)	8	\$ (6,307)	\$ (6,311)	\$ (6,311)	\$ (6,311)	\$ (6,311)	\$ (18,933)
2021	\$ 28,787	8	\$ 3,598	\$ 3,598	\$ 3,598	\$ 3,598	\$ 3,598	\$ 7,196
2020	\$ 3,798	8	\$ 475	\$ 475	\$ 475	\$ 475	\$ 475	\$ 475
2019	\$ 167,797	8	\$ 20,975	\$ 20,975	\$ 20,975	\$ 20,975	\$ 20,975	\$ -
2018	\$ (299,557)	8	\$ (37,445)	\$ (37,445)	\$ (37,445)	\$ (37,445)	\$ -	\$ -
2017	\$ 99,029	8	\$ 12,379	\$ 12,379	\$ 12,379	\$ -	\$ -	\$ -
2016	\$ (92,933)	8	\$ (11,616)	\$ (11,616)	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			(17,941)	(17,945)	(6,329)	(18,708)	18,737	(11,262)

AMORTIZATION SCHEDULE – CHANGES OF ASSUMPTIONS

Increase (Decrease) in Pension Expense Arising from the Recognition of the
Effects of Changes of Assumptions

Year Base Established	Effects of Changes in Assumptions	Recognition Period (Years)	2023	2024	2025	2026	2027	Thereafter
2022	\$ 33,877	8	\$ 4,232	\$ 4,235	\$ 4,235	\$ 4,235	\$ 4,235	\$ 12,705
2019	\$ 467,158	8	\$ 58,395	\$ 58,395	\$ 58,395	\$ 58,395	\$ 58,395	\$ -
2018	\$ (107,650)	8	\$ (13,456)	\$ (13,456)	\$ (13,456)	\$ (13,456)	\$ -	\$ -
2016	\$ 641,098	8	\$ 80,138	\$ 80,138	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 129,309	\$ 129,312	\$ 49,174	\$ 49,174	\$ 62,630	\$ 12,705

AMORTIZATION SCHEDULE – INVESTMENTS

Increase (Decrease) in Pension Expense Arising from the Recognition of the Differences Between Projected and Actual Earnings on Pension Plan Investments										
Year Base Established	Differences Between Projected and Actual Earnings	Recognition Period (Years)	2023	2024	2025	2026	2027	Thereafter		
2022	\$ 905,676	5	\$ 181,136	\$ 181,135	\$ 181,135	\$ 181,135	\$ 181,135	\$ -	\$ -	
2021	\$ (924,645)	5	\$ (184,929)	\$ (184,929)	\$ (184,929)	\$ (184,929)	\$ -	\$ -	\$ -	
2020	\$ 533,705	5	\$ 106,741	\$ 106,741	\$ 106,741	\$ -	\$ -	\$ -	\$ -	
2019	\$ 177,373	5	\$ 35,475	\$ 35,475	\$ -	\$ -	\$ -	\$ -	\$ -	
2018	\$ 84,619	5	\$ 16,924	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Net Increase (Decrease) in Pension Expense			\$ 155,347	\$ 138,422	\$ 102,947	\$ (3,794)	\$ 181,135	\$ -		

SCHEDULE OF CONTRIBUTIONS

Plan Year-End	Actuarially Determined Contribution	Contributions in Relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
04/30/2022	679,478	690,713	(11,235)	1,611,917	42.85%
04/30/2021	634,090	687,092	(53,002)	1,645,994	41.74%

The following assumptions were used to determine the Actuarially Determined Contribution for the plan year ending April 30, 2022:

Calculation Timing	The Actuarially Determined Contribution is calculated using a May 1, 2020 valuation date.
Interest Rate	6.75%
Mortality Rate	<p>Active Lives: PubS-2010 Employee mortality, projected 5 years past the valuation date with Scale MP-2019. 10% of active deaths are assumed to be in the line of duty.</p> <p>Inactive Lives: PubS-2010 Healthy Retiree mortality, projected 5 years past the valuation date with Scale MP-2019.</p> <p>Beneficiaries: PubS-2010 Survivor mortality, projected 5 years past the valuation date with Scale MP-2019.</p> <p>Disabled Lives: PubS-2010 Disabled mortality, projected 5 years past the valuation date with Scale MP-2019.</p>
Assumptions	All other assumptions and methods used for determining the Actuarially Determined Contribution can be found in the May 1, 2020 Actuarial Valuation Report for the City of Washington Police Pension Fund prepared by Foster & Foster Actuaries and Consultants.

SCHEDULE OF INVESTMENT RETURNS

For the year ended April 30, 2022, the annual money-weighted return on Pension Plan investments, net of pension plan investment expense, was unknown. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Plan Year-End	Annual Money-Weighted Rate of Return Net of Investment Expense
04/30/2022	N/A
04/30/2021	19.11%

ASSUMPTIONS – GASB PENSION LIABILITY AND PENSION EXPENSE

The GASB 67 Pension Liability as of April 30, 2022 and Preliminary GASB 68 Pension Expense for the City's May 1, 2022 - April 30, 2023 reporting period were determined as follows:

Valuation Date	May 1, 2022
Measurement Date	April 30, 2022
Discount Rate	6.75%
Inflation	2.50%
Salary Increases	Service-based rates
Other Assumptions	A summary of complete assumptions can be found in the accompanying Actuarial Valuation as of May 1, 2022 for the City of Washington Police Pension Fund prepared by Foster & Foster Actuaries and Consultants.

The GASB 67 Total Pension Liability and Preliminary GASB 68 Pension Expense reflect the following assumption changes:

- Updated mortality, retirement, disability, and termination rate tables.
- Updated assumed salary increase rates.

The GASB 68 Pension Liability and Final Pension Expense for the current City reporting period were determined as follows:

Valuation Date	May 1, 2021
Measurement Date	April 30, 2021
GASB 68 Expense Measurement Period	May 1, 2020 - April 30, 2021
Reporting Period	May 1, 2021 - April 30, 2022
Discount Rate	6.75%
Inflation	2.50%
Salary Increases	Service-based rates
Other Assumptions	A summary of complete assumptions can be found in the Actuarial Valuation as of May 1, 2021 for the City of Washington Police Pension Fund prepared by Foster & Foster Actuaries and Consultants.

NOTES TO THE FINANCIAL STATEMENTS

Support for Long-Term Expected Rate of Return

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by target asset allocation percentage and by adding expected inflation.

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation adopted as of April 30, 2022, are unknown.

Concentrations

It is unknown if the Plan held investments in any one organization that represent 5 percent or more of the Pension Plan's fiduciary net position.

Discount Rate

The Discount Rate used to measure the Total Pension Liability was 6.75 percent.

The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments (6.75 percent) was applied to all periods of projected benefit payments to determine the Total Pension Liability.

For the purpose of this valuation, the expected rate of return on pension plan investments is 6.75 percent. The municipal bond rate is 3.98 percent (based on the daily rate closest to, but not later than the measurement date of the S&P Municipal Bond 20 Year High Grade Rate Index). The resulting single discount rate is 6.75 percent.

SUMMARY OF CURRENT PLAN

Article 3 Pension Fund

The Plan is established and administered as prescribed by “Article 3. Police Pension Fund – Municipalities 500,000 and Under” of the Illinois Pension Code.

Plan Administration

The Plan is a single employer defined benefit pension plan administered by a Board of Trustees comprised of:

- a.) Two members appointed by the Municipality,
- b.) Two active members of the Police Department elected by the Membership.
- c.) One retired member of the Police Department elected by the Membership.

Benefits Provided

The Plan provides retirement, termination, disability and death benefits.

A summary of the benefit provisions can be found in the accompanying Actuarial Valuation as of May 1, 2022 for the City of Washington Police Pension Fund prepared by Foster & Foster Actuaries and Consultants.